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DESCARTES'S DISCOURSE ON METHOD.

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THE DISCOURSE ON METHOD AND METAPHYSICAL MEDITATIONS OF RENÉ DESCARTES. TRANSLATED BY GERTRUDE BURFORD RAWLINGS.

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INTRODUCTION.

FOUR years after the death of the great sceptic Montaigne—that is to say, in 1596—was born René Descartes, the first exponent of methodical doubt, and the first to use doubt, not to destroy, but to build up. He came of a noble family of Touraine, and even from his earliest years gave evidence of an unusually precocious and intelligent mind. His father prophetically named him his Philosopher, because of his ceaseless questions as to the why and how of things. On account of his feeble health he was not allowed to begin any serious study till his eighth year,—quite soon enough in any case, one would think,—and more care was given to his body than to his mind. But the sickly child, for whom his doctors foretold an early death, though not destined to make old bones, as the saying is, was to live long enough to revolutionise philosophy and inaugurate a new era of thought, and to equal, if not to excel, all his most eminent contemporaries in mathematics and science.

At the age of eight René Descartes was placed at the newly-established college of La Flèche, where, under the especial care of the Rector, he enjoyed more latitude than was permitted to his fellow-students, particularly in the matter of lying in bed in the morning. The primary reason for this, as for his other indulgences, was the good of his health, but the habit continued through life, and so far from being mere wasted time, these morning hours—spent, not in sleep, but in meditation—bore fruit in the works which carried Descartes into the first rank of the world's thinkers. At least, such is the very reasonable view of Baillet, the philosopher's chief biographer.

Eight and a half years Descartes spent with the Jesuits, studying languages, history, mathematics, philosophy, and theology, and showing extraordinary ability. Poetry and mathematics were his favourite subjects. But these studies, wide though they were, did not satisfy him, or give him "a clear and sure knowledge of all that is useful in life," and after he had gone through the whole course, and was entitled to rank among the learned, he found that he had gained little except a growing knowledge of his own ignorance. So he tells us in that unique piece of autobiography, the *Discourse on the Method of Rightly Conducting*

the Reason, in the First Part of which he reviews the subjects which occupied his attention at La Flèche, their effect upon his mind, the reasons which led him to renounce letters as soon as he had finished with preceptors and tutors, and his intention of gathering knowledge at first hand only.

" . . . Resolving to seek only that knowledge which I could find within myself, or in the great book of the world, I employed the remainder of my youth in travelling, in observing courts and armies, in associating with persons of divers tempers and conditions, in gathering various experiences, in testing myself under such conditions as fortune offered me, and, above all, in reflecting upon the things which came before me in such wise that I might draw some profit from them. For it seemed to me that I could meet with much more truth in the reasoning which each man makes concerning his own affairs, and whose immediate consequences would soon punish him for any errors of judgment, than in those made by a scholar in his study concerning speculations which produce no effect and lead him to no result, except, perhaps, that he will extract from them so much the more vanity as they are removed from common sense, because he shall have had to employ so much the more wit and artifice in

making them probable. And I always had a great desire to learn to distinguish the true from the false, in order to see clearly as regards my actions and to walk in this life with assurance."

He left La Flèche in 1612, and in the following year he went to Paris and spent the good time that a young man of seventeen, fresh from college and a country home, would be expected to enjoy on the occasion of his first visit to the capital. But he did not thus indulge himself for long. In Father Mersenne, whose acquaintance he had made at La Flèche, and Mydorge, the celebrated mathematician, he found companions better suited to his taste than the gay and thoughtless, and, his mind newly stimulated by intercourse with these two friends, he abandoned amusements and for two years devoted himself entirely to mathematical study.

In 1617 his desire to travel and observe his fellow-men led him to join the army of Prince Maurice of Nassau, as a volunteer, and at his own expense; in accordance with a custom then prevalent among the young nobles of France. The Prince's force was then at Breda, where Descartes remained for two years, during which time he saw no active service. Instead, he applied himself to study.

On quitting the Prince's service he entered that of the Duke of Bavaria, travelled for a time in Germany, and then settled down in winter quarters at Neuberg. It is to this period, a very momentous period in his life, that the Second Part of the *Discourse* refers. As he relates there, he was shut up in a warm room, with no distractions or diversions, and perfectly free to commune with himself. He made full use of circumstances so favourable to meditation, by preparing his mind for inquiry, that is to say, by clearing it from all prejudice and other impediments to free and independent thought. He saw that as we are accustomed from our earliest days to be led by our appetites and our preceptors, which are often opposed, it is well-nigh impossible that our judgments can be as pure and solid as if we had used our own reason alone, and had been guided by nothing else. He therefore concluded that he could not do better than strip himself of all the opinions he had held hitherto, in order to replace them by better ones, or by the same modified by reason. He believed that he could conduct his life better thus than by building on old foundations, that is, on principles accepted without examination. His aim was "*to seek the true method for attaining to the knowledge of all the things of which his mind*

was capable," and to guide him in this search, he formulated four rules, which, simple as they may appear, are really the foundation of his great Method. Then he took certain precautions lest the process of discarding old opinions should vitiate action or lead to irresolution. All this is told in the Second and Third Parts of the *Discourse.*

It was at Neuberg, also, that Descartes made his discovery of the possibility of solving geometrical problems by means of algebra. On his own admission, it intensely excited him, for he saw no end to its consequences. To quote from the epitaph written by his friend, the Ambassador Chanut, for the tomb erected over his grave in the cemetery at Stockholm,—"comparing the mysteries of nature with the laws of mathematics, he dared to hope that the secrets of both could be unlocked with the same key."

It was on the 10th of November, 1619, that the discovery was made, and the making of it was attended by three visions or dreams. Two were warnings to him to amend his life, but the third, according to Descartes's own interpretation, signified that the Spirit of Truth, who appeared to him therein, wished to show him the treasures of all the sciences. In consequence of these

visions Descartes vowed a pilgrimage to the shrine of Our Lady of Loretto, to ask her help in his future work, and he duly performed his vow.

Since opinions differ as to Descartes's real attitude towards religion, it may be well to observe here that original and independent as he was in other matters, he made a reservation in the case of theology. Apprehending that revealed truths are above our comprehension, he says, he dared not submit them to his feeble reasonings, holding that in order to examine them successfully he would need extraordinary help from heaven and to be more than man.

At that period the cloud of scientific heterodoxy had not yet wholly risen from the sea, and it is not inconsistent with Descartes's resolve to accept nothing at second hand and without examination that he should except the truths of revelation. He had been educated by the Jesuit Fathers, and even when he first formulated his system of doubt it is conceivable and even natural that he should have treated religious truths as outside the sphere of inquiry. In these days nothing is considered outside the sphere of inquiry, but it was not so then, and though Descartes himself brought in the new order, it does not follow that he carried out his

principle to its fullest extent. The pioneer of a new principle seldom sees all its effects. We cannot, therefore, hastily accuse Descartes of religious scepticism, and although we know that in time he came to find his convictions at variance with the theology of the day, no one can dogmatise as to when and to what extent he saw that they were incompatible. Nor, in a short sketch like the present, can the arguments of those who believe Descartes a sceptic, and those who, on the contrary, regard him as orthodox, be adequately set forth. In any case, however, we learn from the *Discourse* that the philosopher's provisional moral included the rule to remain constant to the religion in which the grace of God had caused him to be instructed from his youth up, and this rule he kept to his dying day, and professed Catholicism all his life.

It is unnecessary to follow in detail Descartes's career for the next few years. We need only notice that in 1620 he served in the Duke of Bavaria's army in Bohemia, and in the following year under the Comte de Bucquoy in Hungary.

On the death of the latter, Descartes left the army and travelled in Germany, Holland, and Italy, and in the course of these wanderings paid two short visits to his home. On one of these visits he received

from his father his share of his maternal inheritance (his mother died when he was an infant), which he subsequently sold. He then took up his residence in Paris, where he remained for three years, applying himself to science, including the polishing of lenses and the study of optics. But Paris life was not favourable to philosophic retirement, and he was continually disturbed by friends, and by admirers whom his reputation as a mathematician was already attracting. He attempted to evade them by secretly leaving the house where he was staying and taking apartments elsewhere. But his efforts to hide himself were unsuccessful, he was hunted out of his retreat, and finding the hopelessness of seeking peaceful solitude, he betook himself to the siege of Rochelle, then in progress, as he was interested in the military engineering there displayed. On arriving at the scene of action he offered his services as volunteer, but returned to Paris as soon as the king had entered Rochelle.

Several reasons combined to induce him to quit Paris for a more secluded retreat. Besides the inevitable hindrances he there encountered to the study to which he had dedicated himself, and the impossibility of prosecuting his inquiries amid the distractions of social life, he found the warm climate

uncongenial. The exhortations of Cardinal Bérulle to make good use of his abilities also helped to strengthen his determination to withdraw himself from the world. It is believed, however, that Descartes's real motive was his disinclination to embroil himself with the Church. The Church, as represented by Rome and the Inquisition, did not encourage new ideas. For instance, the theory of the earth's motion had but recently been branded as heresy, and Galileo, who taught it, brought down on himself the persecution of the Inquisition. Descartes probably foresaw that conventional Catholicism and his scientific convictions would sometimes point him in opposite or apparently opposite directions, and, whether from respect for ecclesiastical prejudices or fear of ecclesiastical coercion, thought it wiser to seek some country where he might be free to pursue his studies regardless of consequences. Yet even in Protestant Holland he failed to find the liberty he had hoped for.

So Descartes laid his plans. He appointed Father Mersenne his Paris correspondent and agent, placed his business affairs in the hands of the Abbé Picot, bade farewell to his friends—save one or two of the most intimate—by letter, and without giving them time to hinder him by regrets or

dissuasions, left Paris at the latter end of 1628. Whither he went at first is not known, but it is supposed to have been some retired spot in the north of France whose climate should help to prepare him for the severer weather of Holland. For it was to Holland that he was bound, drawn thither partly by the fact that he was acquainted with no one living there, though, had it not been for some other considerations, his inclination would have led him to Italy.

In 1629 he took up his abode at Amsterdam, but throughout his sojourn in Holland he was continually moving from place to place, spending a few months here, and a few months there, always, however, keeping in view his great object, the prosecution of his studies, and therefore shunning society. He took elaborate precautions against discovery. For instance, his letters were not to be forwarded to him direct, and those he wrote were dated from some place other than that where he happened to be. His self-imposed exile from home and friends in order to apply himself wholly to his work shows how thoroughly earnest he was in his purpose, for although he subordinated everything to his work, he was neither hermit nor misanthrope. As he says in a letter to Chanut, "Although I shun the multitude because of all the

impertinences and importunities one meets with, I always hold that the greatest pleasure in life is the enjoyment of conversation with those whom we esteem." And the aim of his philosophy was the good of the human species. His difficulty in avoiding his friends, also, testifies that he had a certain measure of popularity among them.

Of his life in Holland his correspondence gives us such information as we possess, but the personal, as distinguished from the scientific value of these letters is somewhat discounted by the fact that they were written with a view to publication.

For twenty years Descartes dwelt in Holland, though, as we have said, he did not attach himself to any one place. He went to Denmark in 1634, visited France in 1644, 1647, and 1648, and in 1649 he journeyed to Sweden. At one time he contemplated coming to England, but although Baillet believes that he carried out this intention, there is no proof that he did so, nor is the journey referred to in any of his letters.

During his residence in Holland he wrote or completed nearly all his extant compositions, he made friends, conducted controversies, carried on an extensive correspondence, and studied metaphysics, optics, chemistry, medicine, anatomy,

botany, and astronomy. In all his studies he preferred (as we should expect) observation and experiment to reading. In aid of his botanical inquiries he grew specimen plants in his garden. To further his physiological research he attended at slaughter-houses, and had parts of animals sent home for him to examine at leisure. He also practised vivisection, but though he held that all animals, including man, are merely automata, and that the lower animals differ from man in having no rational soul, he never went to the lengths that some of his adherents did, and assert that animals had no feeling and therefore might be vivisected without compunction.

But he did not carry out his rule of solitude quite as rigorously as his protestations in favour of retirement would lead us to suppose. He made many friends among the Dutch philosophers and other celebrities, he frequently visited the French Ambassador at the Hague, and became on intimate terms with members of the courts of the Prince of Orange and of the ex-King of Poland. For some years, also, there lived with him M. Ville-Bressieux, a doctor, mathematician, and chemist, who had conceived such an affection for Descartes that he left his native France to join the philosopher in Holland. Descartes returned

his affection, and they dwelt and worked together, particularly at optics. Ville-Bressieux was a clever man and made some original inventions, but he always declared his great indebtedness to his friend's instruction. Descartes is known to have been very jealous of his own originality, and to have seldom acknowledged any merit in other people's achievements, but in this instance quite the reverse was the case, and the sincere and grateful compliments paid by Ville-Bressieux to the philosopher were equally sincerely and generously reciprocated.

It is said that Descartes frequently astonished his friend by the surprising things he could show him for his entertainment, the most wonderful being a display of soldiers, who seemed to enter, pass through, and quit the room in which they were. This he did by means of a mirror, and some concealed toy soldiers which he magnified to natural size.

In 1633 Descartes finished his *Treatise on the World*, or *On Light*, a work embodying an epitome of his physics, and was about to arrange for its publication when he heard that Galileo, who some years before had provoked the Inquisition by his theory of the earth's motion, had been cast into prison and forced to abjure his doctrine. Now, in the *World*,

Descartes had taken this theory of Galileo's as an important assumption, and on it his chain of reasoning depended. On learning Galileo's fate, therefore, Descartes kept back his treatise, for although, he says, he believed the reasons it contained were "founded on very certain and very evident demonstrations, yet I would not for anything in the world maintain them against the authority of the Church." He adds that his desire to live a peaceful and retired life made him more pleased to be secure from the fear of contracting undesired acquaintances by means of his writings, than sorry to have wasted time and pains in composing the *World*. This a little makes us wonder why he troubled to write it. But it is at least possible that fear of a fate like to Galileo's was as responsible for his suppression of the work, as either respect for the Church or love of peace. In a subsequent letter to Mersenne on this subject he says that as he firmly believes the infallibility of the Church, and at the same time doubted none of his own reasons, he had no fear that one truth would be contrary to the other. Nor did he find anything in his philosophy which did not agree better with theology or religion than did the vulgar. Nevertheless, the *World* was not published till after his death.

Later on, however, Descartes reconsidered his determination not to publish any of his writings, and in 1637 appeared the *Discourse on the Method of Rightly Conducting the Reason, and of seeking Truth in the Sciences*, with treatises on *Dioptrics*, *Meteors*, *and Geometry*, intended as essays in this method. Descartes had at first intended that the work should be published anonymously in Paris, and as a matter of fact no author's name appears on its title-page. But Mersenne, whose help he asked in making the necessary arrangements, not only obtained a privilege from Louis XIII. entitling the writer of the *Discourse* to publish where and what he chose, but disclosed the secret of its authorship to several friends and frustrated, unwittingly perhaps, his design of anonymity. The book was eventually published at Leyden.

Descartes was very anxious to know what effect his work produced on the minds of the learned, and to this end sent copies to certain of the most prominent French scholars, that they might give their opinion of it, and asked for criticisms from all quarters. The *Discourse* does not seem to have excited much remark, except as regards the theory of the circulation of the blood, which is set forth in the Fifth Part. But to various points in the *Essays* objections were plentiful, the

most important being those of Ciermans, a Louvain Jesuit, and the French mathematicians Morin, Fermat, and Roberval. After replying to some of these objections, Descartes announced his intention of giving up mathematics, that is (to use his own words), abstract geometry, and questions which merely test ingenuity, saying that he had devoted himself to a study for which all his life, however long, would not suffice, and he would therefore do wrong to waste time on what was useless to his purpose, such as the problems which his friends were so fond of submitting for his solution.

By this time the teaching of Descartes had attracted wide attention, and his adherents formed a large body. One of the earliest to embrace his teaching was Reneri, with whom he had become acquainted on his first arrival in Amsterdam, and who, on being appointed Professor of Philosophy in the new University of Utrecht in 1634, used his position to propagate the Cartesian doctrines. He died five years later, however, and at his funeral an oration was spoken in the name of the University, which, says Baillet, was no less the panegyric of the living Descartes than the funeral eulogy of the dead Reneri. It praised Reneri chiefly for his courage in discarding authority in matters of

philosophy, so as to walk freely in that liberty to seek out truth which God has bestowed on human reason,—in which, of course, he showed himself the faithful reflector of Descartes's great method.

The magistrates joined the University in thus publicly acknowledging the Cartesian teaching, by ordering the oration to be printed and circulated by their authority, in memory of the dead, and in honour of Descartes and the new philosophy.

But notwithstanding that the University of Utrecht was officially Cartesian, certain of its members remained obstinately conservative, and headed by Gisbert Voët, professor of theology, who in 1641 was made Rector, a party of theologians was formed which attacked the new philosophy (including the theory of the circulation of the blood) as pernicious to the Protestant religion and the peace of the States-General. They were virulent against his doctrines and abusive to Descartes himself, and they succeeded in goading the Utrecht magistrates, despite their public expression of approval of Descartes's work, into summoning that daring revolutionist before them as a fugitive and criminal, and later, into forbidding the sale of his books. But before they could procure the public

burning of his works at the hands of the hangman, as they wished, Descartes appealed in self-defence to the French Ambassador, by whose influence an order was issued by the States-General which put an end for the time to the active hostilities of his enemies. The feud blazed for four years, but neither this nor a subsequent attack from the Leyden philosophers hindered the progress of the Cartesian doctrine.

In 1641 Descartes published his *Metaphysical Meditations*. As in the case of his *Discourse* and *Essays*, he solicited objections and criticisms, and this time he received replies from Caterus, Hobbes, Arnauld, Gassendi, and others of lesser note. To all these criticisms he replied, but by none would he allow himself to be convinced of error.

His next published work, *The Principles of Philosophy*, dedicated to the Princess Elizabeth of Bohemia, appeared at Amsterdam in 1644, and twice in that year he journeyed to Paris on private business. These visits were but short, however, and returning to Holland, he applied himself diligently to anatomical study. An attack by the theologians of Leyden was made against him three years later, and again he had to seek protection from the Government. He also carried on an extensive

correspondence with the Princess Elizabeth, his warm friend and eager pupil. The Princess afterwards became Abbess of Hervorden in Westphalia, where she established an academy of philosophy, to which men and women of every sect were admitted, and which took rank as one of the first schools of Cartesianism.

Another royal and learned lady now entered into the philosopher's life. At this time Queen Christina sat on the Swedish throne, and Chanut, Descartes's friend, dwelt at her capital as Resident and afterwards as Ambassador of France. The queen was young, clever, and studious, and it was Chanut's wish to make Descartes known to her. He brought the philosopher to her notice by referring to him some questions concerning love and hate, in the discussion of which her majesty was interested. The Queen was attracted by Descartes's reply, which took the form of a dissertation on love, questioned Chanut about him, and sent him, through Chanut, an assurance of her esteem.

Once more private affairs called Descartes to France, and here he was offered, and accepted, a pension of 3000 livres, in acknowledgment of his achievements and the utility of his philosophy and research to the human race, and in aid of his experiments. But this did not hinder his return

to Holland, where he continued his preparations for the writing of a treatise on *Man*, which he had been contemplating for many years. It was not long, however, before he received from the French court a promise of office and an increased pension, conditional on his return to his own country. The proposal met with his approval, and he went again to Paris, but only to find that the disturbances of the Fronde had thrust the claims of philosophy into oblivion. Perceiving that he was not wanted in Paris to be of any use, but only as a species of curiosity "like an elephant or panther," as he says, he returned to Holland after three months. There he received another royal invitation, but this time from Queen Christina, who had begun a course of his philosophy and desired his personal instruction. To this end she sent an admiral and a ship to bring him to Stockholm.

As soon as he had put his affairs in order, Descartes departed for Sweden, and reached Stockholm in October, 1649. The Queen received him cordially, and Chanut's house was opened to him. So earnest was Christina in her pursuit of philosophy that she fixed her hour for study at five o'clock in the morning, in the palace library, and at this unseasonable hour, and in the severe northern winter, Descartes the indolent, the lie-

abed, had to attend her two or three times a week. She also held several conferences with him late at night on the subject of an Academy of Sciences which she desired to establish, and at this time, too, an additional tax on his strength was made by the illness of Chanut, whom Descartes watched over with assiduous care. It is not surprising that these changes in his habits and the exposure to a new and exceptionally trying climate induced illness. Within less than five months of his landing in Sweden, Descartes was dead.

He died on the 11th of February, 1650, at the age of fifty-four, and was buried in Stockholm, but sixteen years later his remains were removed to his own country and re-interred in the church of Ste. Geneviève in Paris.

As a man of science, as a mathematician, but especially as a philosopher, Descartes stands alone. In science and mathematics he anticipated several later discoveries, such as the vibration theory of colour, and in philosophy, by his use of methodical doubt as a philosophic instrument, he opened a new era in the history of thought.

Of Descartes's writings the earliest extant is a little *Treatise on Music*, written when he was at Breda, but not published till after his death. His first recorded composition, a *Treatise on Fencing*,

was written just after he left college, and is known to us only by name.

The *Discourse on the Method of Rightly Conducting the Reason* was his first published work, and appeared, in French, in 1637, at Leyden. It tells us how Descartes prepared his thought to interrogate the universe; how he bade it ignore all beaten tracks, and all sign-posts, and strike out the most direct path, following the sun of reason so far as it was permitted to see it. He sent it forth naked, untrammelled by antique garments woven by tradition, unhindered by the cumbersome cloak of prejudice, unshackled by authority. Thus, neither distracted nor impeded, it was to approach the great problems. And this was the famous *Method.* The chapters on *Dioptrics*, *Meteors*, and *Geometry*, which follow the *Discourse*, and which were intended as examples of the use of the *Method*, are now out of date. A Latin edition of the *Discourse* and *Essays* (omitting the *Geometry*) was made by Étienne de Courcelles and revised by Descartes, and published at Amsterdam in 1644 under the title *Specimina Philosophiæ.*

The *Metaphysical Meditations* were first published in Latin, in Paris, 1641, and it is said that Descartes used frequently to boast that they

contained important truths which had never before been examined, and formed the entrance to the true philosophy, whose principal object was to show the difference between mind and body. They were intended as an explanation of the metaphysics of the *Discourse*. A French rendering was made by the Duc de Luynes, and having been revised by Descartes, took rank as an original, and was issued in 1647. In the second Latin edition (Amsterdam, 1642) Descartes altered the title and substituted "distinction between soul and body" for "immortality of the soul."

The *Principles of Philosophy* appeared at Amsterdam in 1644, and a French version by Picot was issued in Paris three years later. It was designed as a substitute for two suppressed works, the *Treatise on the World*, or *On Light*, and the *Philosophical Course*, and explained the general phenomena of nature. Descartes had planned to treat other subjects, such as man, medicine, mechanics, etc., in the same way, but he did not live to accomplish more than the treatise on *Man*.

Descartes's final publication was the *Treatise on the Passions of the Soul* (Paris, 1649), a little work which he wrote to show the action of body and soul (or mind) upon each other, and

the parts played by both with respect to the passions.

The present translation of the *Discourse* is based on the French text of 1637; and of the *Meditations*, on the French text of 1661, a reprint of the edition of 1647.

G. B. R.

DISCOURSE

Upon the Method of rightly conducting the Reason and the Research of Truth in the Sciences.

If this discourse appear too long to be read all at one time, it may be divided into six parts. In the first will be found divers considerations touching the sciences; in the second, the principal rules of the method that the Author has sought out; in the third, some of the moral rules which he has deduced by this method; in the fourth, the reasons by which he proves the existence of God and of the human soul, which are the foundations of his metaphysics; in the fifth, the order of the questions which he has investigated concerning physics, and particularly the explanation of the movements of the heart, and of some other difficulties which pertain to medicine; then, also, the difference between our soul and that of animals; and in the last, some matters which he believes requisite for a deeper inquiry into nature than he has made, and the reasons which have led him to write.

First Part.

Good sense is better distributed than anything in the world; for each thinks himself so well provided therewith, that as a rule even those who are the most difficult to satisfy with regard to everything else, do not desire more of it than they already have. This does not show that every one deceives himself; it testifies rather to the fact that the power of judging well and of distinguishing the true from the false, which is properly that which we call good sense, or reason, is naturally equal in all men. And thus the diversity of our opinions is not because some are more reasonable than others, but only because we conduct our thought by different ways, and do not all consider the same things. For it is not sufficient that the understanding be good—the thing is to apply it well. The greatest minds are capable of the greatest vices as well as of the greatest virtues, and those who proceed but slowly can advance much further, if they follow the right road, than those who hasten in the wrong direction.

For my own part, I have never presumed that my understanding was in any way more perfect than that of most people: indeed, I have often

wished that my thought were as quick, or my imagination as exact and vivid, or my memory as comprehensive or as ready, as those of others. And I know no qualities but these which make for the perfection of the mind, for inasmuch as reason or sense is the only thing which renders us human and distinguishes us from animals, I would believe that it is quite complete in every individual, and follow herein the common opinion of the philosophers, who say that there are variations only as regards accidentals, and not between the forms and natures of individuals.

But I shall not be afraid to say that I think I have been very fortunate since my youth in having come upon various ways which have led me to considerations and maxims from which I have constructed a method by which, it seems to me, I have the means of gradually augmenting my knowledge, and of raising it little by little to the highest point to which the mediocrity of my understanding and the short duration of my life may permit of its attaining. For I have already gathered such fruits therefrom, that although with regard to the judgments I make by myself I always endeavour to incline to the side of distrust rather than of presumption, and although when I observe with a philosopher's eye the various actions and

undertakings of men there are hardly any of them which do not seem to me vain and useless, I do not cease to derive extreme satisfaction from the progress that I believe I have already made in the research of truth, and to conceive such hopes for the future, that if among the occupations of men, as men, there is any which is substantially good and important, I dare believe it is this that I have chosen.

At the same time it is possible that I deceive myself, and perhaps what I take for gold and diamonds is only a little copper and glass. I know how liable we are to be mistaken in that which concerns ourselves, and also how we should suspect our friends' judgments when they are in our favour. But I shall be very glad to show in this discourse the paths I have followed, and to represent my life therein as in a picture, so that every one may judge of it, and that learning from the general talk people's opinions concerning it, I may find it a new means of instructing myself, which I can add to those I am accustomed to employ.

Thus it is not my intention to teach here the method which each man ought to follow for the right guidance of his reason, but only to show in what manner I have tried to conduct my own.

Those who have to do with the giving of precepts should esteem themselves cleverer than those to whom the precepts are given, and if these are in any way defective, they are to blame for it. But since I propose this writing only as a history, or, if you like it better, as a fable, in the which, among many examples that may be imitated, will be found perhaps as many others which people will be right in not following, I hope that it will be useful to some, without being hurtful to any, and that all will be pleased with my frankness.

I have been nourished on letters from my infancy, and because people persuaded me that by their means a man could acquire a clear and certain knowledge of all that is useful in life, I had a great desire to become acquainted with them. But as soon as I had finished all the course of study at the termination of which a man is usually received into the ranks of the learned, I entirely altered my opinion, for I found myself hampered by so many doubts and errors that it seemed that I reaped no benefit from my effort to instruct myself, except that I discovered more and more my own ignorance. And yet I was in one of the most celebrated schools in Europe, where I thought learned men would be found if such existed anywhere: I learned there all that the others learned,

and even, being dissatisfied with what we were taught, I went through all the books I could get hold of which treated of those sciences which are esteemed the most curious and most rare: moreover, I knew the opinions that the others formed concerning me, and I did not see that they held me inferior to my fellow-students, although there were already some among them destined to take the places of our masters: and finally, our age seemed to me as flourishing, and as fertile in intelligent minds, as any which had preceded it. This is what made me take the liberty of judging all the rest by myself, and of believing that there was no doctrine in the world such as I had formerly been led to hope.

At the same time I did not cease to esteem the studies with which they occupy themselves in the schools. I knew that the languages which are acquired there are necessary to the understanding of ancient books; that the graceful turns of stories quicken the mind; that the memorable actions of history elevate it, and when read with discretion assist in forming the judgment; that the reading of all the good books is like a conversation with the worthiest men of past times, their authors, and a studied conversation, too, in which they reveal to us only the best of their

thought; that eloquence has incomparable power and beauty; that poetry has very charming refinements and sweetnesses; that mathematics have very subtle inventions which can be of great service, whether in satisfying the curious or in facilitating men's arts and diminishing their labours; that the writings which treat of morals contain much information and many virtuous precepts which are very useful; that theology teaches the way to heaven; that philosophy affords the means of speaking with probability of everything, and of gaining the admiration of the less learned; that jurisprudence, medicine, and other sciences bring honours and riches to those who cultivate them; and finally, that it is well to have examined them all, even the most superstitious and false, in order to know their just value and to guard against being deceived by them.

But I thought I had already given enough time to languages, and even to the perusal of ancient books, and to their histories and fables. For to converse with those of other ages is almost the same as to travel. It is good to know something of the manners of different peoples that we may judge soundly of our own, and that we may not think all which is contrary to our customs ridiculous and opposed to reason, as those who

have seen nothing are accustomed to do; but when a man spends too much time in travelling he ends by becoming a stranger in his own country, and when he is too curious concerning things done in times past, he generally remains very ignorant of those practised at the present day. Besides which, fables make many things to be imagined as possible which are not so; and even the most faithful histories, even if they neither alter nor augment the value of things in order to make them more worthy of being read, at least almost always omit from them the lower and less glorious circumstances, so that the remainder does not appear as it really is, and those who regulate their ways by the examples they draw therefrom are liable to fall into the extravagances of the knights-errant of our romances and to conceive designs which surpass their ability.

I greatly esteemed eloquence, and I loved poetry, but I conceived that both were gifts of the mind rather than the fruits of study. Those whose reasoning is the strongest, and who best direct their thoughts so as to render them clear and intelligible, can always best persuade people of that which they put forward, even though they may speak only low Breton, and have never learned anything of rhetoric; and those whose

inventions are the most agreeable, and who can express them with the most grace and charm, will not fail to be the best poets, although the poetic art be unknown to them.

Above all, I took pleasure in mathematics, because of the certainty and evidence of their reasons, but I did not yet remark their true use; and thinking that they served the mechanical arts alone, I was surprised that since their foundations were so firm and solid, nothing more lofty had been built upon them. So, on the other hand, I compared the writings of ancient pagans who treated of morals to very superb and magnificent palaces built only on sand and mud, for they highly exalted the virtues and made them appear estimable above all existing things, but they did not sufficiently teach how to know them, and often that which they call by so fine a name is only insensibility, or pride, or despair, or parricide.

I reviewed our theology, and claimed as much as any to attain to heaven, but having learned as a very sure thing that the way to it is as open to the most ignorant as to the most learned, and that the revealed truths which lead thither are beyond our intelligence, I did not dare submit them to my feeble reasonings, and I thought

that to undertake to examine them, and to succeed therein, I should want some extraordinary assistance from above, and need to be more than man.

Of philosophy I will say nothing, except that seeing that it has been cultivated by the most excellent minds which have lived for many centuries, and that nevertheless no truth is to be found therein which is not disputed, and which consequently is not doubtful, I had not sufficient presumption to hope to fare better than other people; and that considering how many different opinions touching one matter can be upheld by learned men, while only one among them can be true, I accounted as false all which was only probable.

Then as to the other sciences. Forasmuch as they borrowed their principles from philosophy, I judged that nothing solid could have been built on foundations so unstable, and neither the honour nor the profit which they promise was sufficient to induce me to acquire them, for I did not feel obliged, thank God, to make a profession of science in order to increase my means, and although I did not pretend to play the cynic and to despise glory, I nevertheless set little store by that which I could never hope to gain save by false titles. And finally, as regards false doctrines,

I considered that I already knew too well what they were worth, to be liable to be taken in by them, whether by the promises of an alchemist, the predictions of an astrologer, the impositions of a magician, or the artifices or brag of those who profess to know more than they do.

This is why, as soon as I was old enough to quit the authority of my preceptors, I entirely gave up the study of letters, and resolving to seek only that knowledge which could be found within myself, or rather in the great book of the world, I employed the remainder of my youth in travelling, in observing courts and armies, in associating with persons of divers tempers and conditions, in gathering various experiences, in testing myself under such conditions as fortune offered me, and above all in reflecting upon the things which came before me in such wise that I might draw some profit from them. For it seemed to me that I could meet with much more truth in the reasoning which each man made touching the things which concerned himself, and whose immediate consequences would soon punish him for any errors of judgment, than in those made by a scholar in his study concerning speculations which produce no effect and lead him to no result, except, perhaps, that he will extract from them so much the more

vanity as they are removed from common sense, because he shall have had to employ so much the more wit and artifice in making them probable. And I always had a great desire to learn to distinguish the true from the false, in order to see clearly as regards my actions and to walk in this life with assurance.

It is true that as long as I only considered the manners of other men, I found hardly any of them which I could regard as convincing, and I remarked almost as much diversity among them as I had done before among the opinions of the philosophers. The greatest profit, therefore, which I derived from them, was that seeing many things which do not cease to be commonly accepted and approved by other great peoples, although to us they appear very extraordinary and ridiculous, I learned not to believe too firmly anything of which I had been persuaded merely by example and custom, and thus little by little I shook off many errors which can obscure our natural light and make us less capable of understanding reason. But after employing some years in thus studying the book of the world, and in trying to acquire some experience, I one day made a resolve to study myself in the same way, and to use all the power of my mind in selecting the paths which I

ought to follow. And in this, it appears to me, I succeeded much better than if I had never left either my country or my books.

Second Part.

I was then in Germany, whither I had been called by the wars still in progress there, and as I was returning to the army after the coronation of the Emperor, the beginning of winter detained me in a quarter where, finding no intercourse to attract me, and having, fortunately, no cares or passions besides to trouble me, I remained all day shut up alone in a sitting-room where I had perfect leisure to commune with my thoughts. One of the first of these thoughts was that it occurred to me to consider that there is frequently less perfection in works made up of many parts, and wrought by the hand of many masters, than in those upon which one alone has laboured. Thus we see that buildings undertaken and finished by one architect are as a rule more beautiful and better ordered than those that many have attempted to adapt by making use of old walls built for other purposes. Thus, also, the ancient cities which,

having been at first merely straggling villages, have become in course of time great towns, are ordinarily so badly proportioned in comparison with the regular order of those which an engineer traces at his fancy on a plain, that although in considering each building separately we often find in them as much art, or more, as in those of others, yet at the same time, to see how they are arranged, here a large one and there a small, and how crooked and irregular they make the streets, we should say that hazard, rather than the will of men using reason, has disposed them thus. And if we consider that nevertheless there have been in all times certain officers charged with the care of the buildings of private persons, to make them serve for the public ornament, we shall know well that in working upon the productions of others it is not easy to make out of them anything very finished. I also considered that the peoples who were at one time half savage, and who, having been but gradually civilised, have made their laws only in measure as the inconvenience of crimes and quarrels has obliged them to it, cannot have so good a polity as those who, from the time when they first assembled together, have observed the constitutions of some prudent legislator. Thus it is very certain that the estate

of the true religion, whose ordinances have been made by God alone, must be governed incomparably better than any other. And to speak of human things, I believe that if Sparta was formerly very flourishing, it was not because of the excellence of each of its laws individually, seeing that many were very strange and contrary to good morals, but because that having been invented by one man alone, they all had the same object in view. I reflected also that the sciences of books, at any rate those whose reasons were only probable, and had no demonstrations, being composed and built up little by little of the opinions of many different persons, do not approach so near to the truth as the simple reasonings made by one man of good sense concerning the things which come under his notice. And then again, I considered that as we have all been children before becoming men, and for a long time had to be governed by our appetites and by our preceptors, which were often at variance, and as neither, perhaps, always gave us the best counsel, it is almost impossible that our judgments are so pure or so solid as they would have been if we had had the perfect use of our reason from the time of our birth and had never been guided by anything else.

It is true that we do not see all the houses of a

town demolished solely that they may be rebuilt in some other style, and to make the streets more beautiful, but we do see that many individuals pull down theirs in order to build them up again, and sometimes, even, that they are forced to it when the houses are in danger of falling of themselves, and when the foundations are insecure. By this example I persuaded myself that it would be very improbable that a private person would design to reform a state by changing the whole from its foundations, and by overthrowing it in order to set it up again; or even to reform the body of the sciences, or the order established in the schools for teaching them; but that as regarded the opinions that I had received into my belief, I could not do better than attempt, on a good opportunity, to remove them therefrom in order to replace them afterwards either by better ones or by the same after I had brought them up to the level of reason. And I firmly believed that by this means I should succeed in conducting my life better than if I merely built on old foundations, or relied only on principles of which I had allowed myself to be persuaded in my youth, without having ever considered whether they were true. For although I noticed various difficulties in this, they nevertheless were not without remedy, or to be compared

with those which are encountered in the reformation of the smallest matters concerning the public. These great bodies are too hard to raise, when once thrown down, or even to secure when shaken, and their fall cannot but be very heavy. Then, as regards their imperfections, if they have any,—since the mere fact of their diversity is enough to make it certain that many of them have some,—custom, without doubt, has greatly softened them, and has even checked them or insensibly corrected a number of them, which could not so well be compassed by prudence; and in short, they are almost always more endurable than their alteration would be, just as the high roads which wind about among mountains gradually become so connected and so convenient through being frequented, that it is much better to follow them than to attempt to go more directly by clambering up rocks and descending to the bottom of precipices.

This is why I could in nowise approve those blundering and restless persons who, being called neither by birth nor fortune to the management of public affairs, are always devising some new reformation. And if I thought that this writing contained the least thing which could make me suspected of this folly, I should be very

sorry to permit its publication. My design never extends further than the endeavour to reform my own thoughts, and to build on ground which is wholly mine. If, since my work has pleased me, I here show you its plan, it is not because I wish to counsel any one to imitate it. Those to whom God has allotted more of His grace would perhaps have loftier designs, but I much fear that this one is already but too hard for many. Even the resolve to free oneself from all opinions formerly accepted and believed is not an example which every man ought to follow, and the world is almost solely made up of two classes of minds for whom it is by no means expedient,—to wit, of those who, thinking themselves cleverer than they are, cannot refrain from precipitating their judgments, and have not patience enough to conduct all their thoughts methodically, so that if they once took the liberty of doubting the principles they have received, and of escaping from the beaten track, they would never be able to keep to the path they ought to follow in order to proceed more directly, and would remain astray all their life; and those who, having sufficient reason or modesty to judge that they are less capable of distinguishing the true from the false than others by whom they might be instructed, ought much rather to content

themselves with following the opinions of those others than seek better for themselves.

For my own part, doubtless I should have been among these latter, if I had never had but one master, or if I had not known the differences which have existed in all times among the opinions of the most learned. But having learned while I was at the college that nothing so strange and so incredible can be imagined that it has not been put forward by one or another of the philosophers; and having noticed since then, while travelling, that all those whose sentiments are most contrary to ours are not on that account either barbarians or savages, but that many employ as much reason as we, or more; and having considered how the same man, with the same mind, being reared from infancy by French people or by Germans, becomes different from what he would be if he had always lived among Chinese or cannibals; and how even to the fashion of our clothes the same thing which has pleased us these ten years, and perhaps will please us again before another ten are out, now appears strange and ridiculous,—so that it is much rather custom and example which persuade us, than any certain knowledge, though as regards the truths which are difficult to discover the majority of voices is

not a proof which is of any value, because it is much more likely that one man alone would meet with them than a whole nation,—I could not pick out any one whose opinions seemed to me worthy to be preferred to those of others, and I was, as it were, obliged to undertake to guide myself.

But, like a man who walks alone and in darkness, I resolved to go so slowly, and to use so much circumspection in everything, that if I did not advance speedily, at least I should keep from falling. I would not even have desired to begin by entirely rejecting any of the opinions which had formerly been able to slip into my belief without being introduced there by reason, had I not first spent much time in projecting the work which I was to undertake, and in seeking the true method of arriving at a knowledge of everything of which my understanding should be capable.

When I was younger, I had devoted a little study to logic, among philosophical matters, and to geometrical analysis and to algebra, among mathematical matters, — three arts or sciences which, it seemed, ought to be able to contribute something to my design. But on examining them I noticed that the syllogisms of logic and the greater part of the rest of its teachings serve rather for explaining to other people the things

we already know, or even, like the art of Lully, for speaking without judgment of things we know not, than for instructing us of them. And although they indeed contain many very true and very good precepts, there are always so many others mingled therewith that it is almost as difficult to separate them as to extract a Diana or a Minerva from a block of marble not yet rough hewn. Then, as to the analysis of the ancients and the algebra of the moderns, besides that they extend only to extremely abstract matters and appear to have no other use, the first is always so restricted to the consideration of figures that it cannot exercise the understanding without greatly fatiguing the imagination, and in the other one is so bound down to certain rules and ciphers that it has been made a confused and obscure art which embarrasses the mind, instead of a science which cultivates it. This made me think that some other method must be sought, which, while combining the advantages of these three, should be free from their defects. And as a multitude of laws often furnishes excuses for vice, so that a state is much better governed when it has but few, and those few strictly observed, so in place of the great number of precepts of which logic is composed, I believed that I should find the

following four sufficient, provided that I made a firm and constant resolve not once to omit to observe them.

The first was, never to accept anything as true when I did not recognise it clearly to be so, that is to say, to carefully avoid precipitation and prejudice, and to include in my opinions nothing beyond that which should present itself so clearly and so distinctly to my mind that I might have no occasion to doubt it.

The second was, to divide each of the difficulties which I should examine into as many portions as were possible, and as should be required for its better solution.

The third was, to conduct my thoughts in order, by beginning with the simplest objects, and those most easy to know, so as to mount little by little, as if by steps, to the most complex knowledge, and even assuming an order among those which do not naturally precede one another.

And the last was, to make everywhere enumerations so complete, and surveys so wide, that I should be sure of omitting nothing.

The long chains of perfectly simple and easy reasons which geometers are accustomed to employ in order to arrive at their most difficult demonstrations, had given me reason to believe that

all things which can fall under the knowledge of man succeed each other in the same way, and that provided only we abstain from receiving as true any opinions which are not true, and always observe the necessary order in deducing one from the other, there can be none so remote that they may not be reached, or so hidden that they may not be discovered. And I was not put to much trouble to find out which it was necessary to begin with, for I knew already that it was with the simplest and most easily known; and considering that of all those who have heretofore sought truth in the sciences it is the mathematicians alone who have been able to find demonstrations, that is to say, clear and certain reasons, I did not doubt that I must start with the same things that they have considered, although I hoped for no other profit from them than that they would accustom my mind to feed on truths and not to content itself with false reasons. But I did not therefore design to try to learn all those particular sciences which bear the general name of mathematics: and seeing that although their objects were different, they nevertheless all agree, in that they consider only the various relations or proportions found therein, I thought it would be better worth while if I merely examined these proportions in general,

supposing them only in subjects which would serve to render the knowledge of them more easy to me, and even, also, without in any wise restricting them thereto, in order to be the better able to apply them subsequently to every other subject to which they should be suitable. Then, having remarked that in order to know them I should sometimes need to consider each separately, I had to suppose them in lines, because I found nothing more simple, or which I could more distinctly represent to my imagination and to my senses; but to retain them, or to comprehend many of them together, it was necessary that I should express them by certain ciphers as short as possible, and in this way I should borrow all the best in geometrical analysis, and in algebra, and correct all the faults of the one by means of the other.

For I indeed venture to affirm, that the exact observation of the one or two precepts that I had chosen gave me such facility in unravelling the questions comprehended by these two sciences, that in the two or three months which I spent in examining them,—beginning with the simplest and most general, and each truth that I discovered being a guide which afterwards helped me to find others,—not only did I at last come to many which I had formerly accounted too difficult, but

apparently also towards being able to determine, even in those of which I was ignorant, by what means, and to what extent, it was possible to solve them. In this I shall not perhaps appear to you very vain, if you consider that as there is but one truth concerning each thing, whosoever finds it knows as much of that thing as it is possible to know, and that, for example, a child instructed in arithmetic, having made an addition according to its rules, can be certain of having found all which the human mind is capable of finding, respecting the sum under consideration. For in brief, the method which teaches how to follow the true order, and to enumerate exactly every circumstance relating to that which is being sought, contains everything which gives certainty to the rules of arithmetic.

But what satisfied me most with this method, was that by it I was assured of always using my reason, if not perfectly, at least to the best of my power; besides which, I felt in practising it that my mind was accustoming itself little by little to conceive its objects more precisely and more distinctly; and not having subordinated it to any particular matter, I resolved to apply it as usefully to the difficulties of other sciences as I had done to those of algebra. Not that I

therefore dared to undertake to examine forthwith all those which should present themselves, for that would even have been contrary to the order it prescribed; but having observed that their principles must all be borrowed from philosophy, in which I as yet found none which were certain, I thought that it was before all things necessary to try to establish some therein, and that since this is the most important thing in the world, and the one wherein precipitation and prejudice are most to be feared, I ought not to undertake to achieve this until I had attained a riper age than I had reached at that time, for I was then twenty-three years old, and if I had not first spent a long time in preparing myself for it,—as much in eradicating from my mind all the ill opinions that I had formerly received of it, as in making numerous experiments concerning the subject of my reasonings, and in continually practising the method which I had prescribed for myself in order that I might be strengthened in it more and more.

Third Part.

And finally, as it is not sufficient, before beginning to rebuild one's dwelling-house, merely

to throw it down and to furnish materials and architects, or to study architecture, and to have carefully traced the plan of it besides, it is also necessary to be provided with some other wherein to lodge conveniently while the work is in progress. Thus, in order that I might not remain undecided in my actions, while reason obliged me to be so in my opinions, and that I might not thenceforth cease to live as happily as possible, I provisionally made myself a moral, consisting merely of three or four maxims, which I will gladly impart to you.

The first was, to obey the laws and customs of my country, keeping always to the religion in which, by the grace of God, I had been instructed from my childhood; and in everything else governing myself according to the most moderate opinions, and those furthest removed from excess, which were commonly received in practice by the most intelligent among whom I should have to live. For beginning thenceforward to count my own opinions as nothing, because I wished to submit them all to investigation, I was sure that I could not do better than follow those of the most sensible persons. And although there were perhaps as many sensible persons among the Persians, or the Chinese, as among us, it seemed

to me more profitable to govern myself according to those with whom I was to dwell; and that in order to know what their opinions really were, I ought to observe what they practised rather than what they said, not only because that in the corruption of our morals there are few people who will say all that they believe, but also because many do not know what they believe; for the action of the thought by which a man believes a thing being different from that by which he knows that he believes it, they are often the one without the other. And among many opinions equally accepted, I chose only the most moderate, as much because these are always the most convenient for practice, and probably the best,—all excess being bad, as a rule,—as in order to keep nearer the true way, in case I failed, than if, having chosen one extreme, it should be the other which ought to be followed. And I specially put among the extremes all the resolves by which a man curtails anything of his liberty,—not that I disapproved the laws which, to remedy the variableness of feeble minds, requires a man who has some good design, or even (where the security of commerce is concerned) a merely indifferent one, to face oaths and contracts to oblige him to persevere therein,—but because I did not see anything in the world

which remained always in the same state; and because, for my own part, I thought that I should greatly sin against good sense, if, because I approved a thing then, I was obliged to accept it as good ever after, when it would perhaps have ceased to be so, or when I had ceased to esteem it such.

My second maxim was, to be as firm and as resolute in my actions as I could, and to follow the most doubtful opinions, when I had once determined on them, no less constantly than if they were very certain. In this I acted as travellers who find themselves astray in some forest should do, for they ought not to wander about, turning now to one side and now to another, still less to remain in one place, but walk as straight as they can in one direction, and not change it for trivial reasons, although it were chance alone which determined their choice to begin with; for by this means, if they do not go precisely where they desire, at least they arrive in time at some place where they will probably fare better than in the middle of the forest. And as the actions of life seldom permit of any delay, it is a very certain truth, that when it is not in our power to discern the most truthful opinions, we ought to follow the most probable. And even though we remark no

more probability in these than in those, we ought nevertheless to decide upon some, and then no longer consider them doubtful, in so far as they correspond to practice, but as very true and certain, because the reason which has made us decide upon them is so. And this was able henceforward to deliver me from all the regret and remorse which generally agitate the consciences of those feeble and wavering minds which inconstantly allow themselves to proceed to practise as good things which they afterwards judge to be bad.

My third maxim was, always to endeavour to conquer myself rather than fortune, and to change my desires rather than the order of the world, and generally accustom myself to believe that nothing is so entirely within our power as our thoughts; so that after having done our best concerning the things exterior to ourselves, all that is wanting for our success is absolutely impossible to us. This alone seemed sufficient to keep me from desiring in the future anything which I was not able to acquire, and thus to render me contented; for since our will naturally inclines to desire only the things which our understanding represents to it as in some way possible, it is certain that if we consider all the good things which are outside us as equally beyond our power, we shall have no

more regret at the lack of those which appear due to our birth, than at not possessing the kingdom of China or Mexico; and that, making a virtue of necessity, as they say, we shall no more wish to be well, when ill, or free, when in prison, than we desire now to have bodies as incorruptible as diamonds, or wings to fly like birds. But I confess that long practice and much thinking are necessary to accustom us to regard everything from this standpoint, and I believe that it is principally this wherein lay the secret of those philosophers who aforetime were able to avoid dominion and fortune, and in spite of miseries and poverty, to contest felicity with their gods. For, ceaselessly occupying themselves in contemplating the good things prescribed for them by nature, they so completely persuaded themselves that nothing was in their power but their thoughts, that that alone was sufficient to keep them from any affection for other things, and of their thoughts they disposed so absolutely, that they had reason to esteem themselves more rich, more powerful, more free, and more happy than any other men, who, without this philosophy, however favoured by nature and by fortune never thus dispose of everything as they will.

Finally, for the conclusion of this moral, I be-

thought me to review the various occupations of men in this life, in order to try to make choice of the best; and though I desire to say nothing about those of others, I believed I could not do better than continue in my own, that is, in employing all my life in cultivating my reason, and advancing as far as I could in the knowledge of truth according to the method I had laid down for myself. I had experienced such deep content since beginning to use this method that I did not believe it possible in this life to obtain any sweeter or more innocent, and discovering every day by its means truths which seemed to me important, and commonly ignored by other men, the satisfaction I derived from it so filled my mind that none of the others touched me. Besides which, the three foregoing maxims were founded solely on my design to contrive to instruct myself: for God having given to every man light wherewith to tell the true from the false, I would not have believed that I ought for one single moment to content myself with the opinions of others, had I not proposed to employ my own judgment in examining them when the time came; and I would not have known how to rid myself of scruples in following them, had I not hoped thereby not to lose any occasion of finding better,

if there were any; nor, finally, would I have known how to limit my desires or to be content, had I not followed a road which I thought would certainly lead me to the acquisition of all the knowledge of which I was capable, and so to the acquisition of all the truly good things which would ever be within my reach; seeing that as our will inclines neither to pursue nor to avoid anything, except according as our understanding represents it as good or bad, it is sufficient to judge well in order to do well, and to judge the best one can, to do also the best one can—that is, to acquire all the virtues and at the same time all the other good things that can be acquired; and when one is certain of that, one cannot fail to be content.

After having thus assured myself of these maxims, and having set them apart, with the truths of the faith, which have always been the same in my belief, I judged that as regarded the rest of my opinions I might freely set about ridding myself of them. And as I hoped to be able to succeed in them better by conversing with men, than by remaining for any length of time shut up in the room where all these thoughts came to me, the winter was hardly over when I again set out to travel, and throughout the nine years following I did nothing but ramble hither and thither about

the world, endeavouring to be a spectator rather than an actor in the various plays in progress there; and reflecting particularly on that in each matter which could render it suspected, and give us occasion to mistrust ourselves, I meanwhile eradicated from my mind all the errors which had formerly been able to slip into it. Not that I imitated the sceptics, who doubt only in order to doubt, and affect to be always uncertain, for, on the contrary, my only purpose was to assure myself, and to reject shifting earth and sand in order to find rock or clay. In this, methinks, I succeeded sufficiently well, inasmuch as in trying to discover the falsity or uncertainty of the propositions I examined—not by weak conjecture but by clear and assured reasonings—I met with none so doubtful that I did not draw some certain conclusion from it, even were it only that it contained nothing certain. And as in pulling down an old house a man usually preserves the materials in order to use them to build a new one, so in destroying all my opinions which I believed to be ill-founded, I made divers observations and gained many experiences which have helped me since to establish many opinions which are most certain. Moreover, I continued to practise the method I had laid down for myself, for besides

that I wanted to conduct all my thoughts in general according to its rules, I reserved from time to time certain hours which I spent in testing mathematical difficulties, and even, also, some others which I could render almost similar to those of mathematics by detaching them from all other scientific principles which I did not consider sufficiently firm, as you will see I have done in many which are explained in this volume.[1] And thus, without appearing to live differently from those who, having no other employment than the spending of a peaceful and innocent life, make it their study to separate pleasures from vices, and who, to enjoy their leisure without tiring of it, avail themselves of every diversion which is honest, I did not cease to prosecute my design, and to profit by the knowledge of truth more, perhaps, than if I had only read books or frequented the company of men of letters.

Yet these nine years slipped away before I had touched upon the difficulties which are generally disputed among the learned, or had begun to seek the foundations of any philosophy more certain than the vulgar. And the example of many excellent minds who had the foregoing design, and who seemed to me to have failed therein,

[1] See Introduction, pp. xxi., xxii.

made me imagine it so difficult that I would not yet perhaps so soon have dared to undertake it, had I not discovered that it was already put about that I had succeeded in it. I cannot say on what this opinion was founded, and if I contributed anything to it by my discourses, it must have been by confessing that of which I was ignorant more ingenuously than those who have studied a little are wont to do, and perhaps, also, by exhibiting my reasons for doubting so many things that others held as certain, rather than boasting of having found any doctrine. But being sufficiently upright not to wish to be taken for anything but what I am, I thought it necessary that I should try by every means to render myself worthy of my reputation, and it is just eight years since this desire made me resolve to remove myself from all the places where I might have acquaintances, and to retire here to a country where the long duration of the war has established such order, that the sole purpose of the armies here met with seems to be the more secure enjoyment by the people of the fruits of peace; and where among the multitude of a great and very active people who are more careful of their own affairs than curious about other persons', and without lacking any of the conveniences of the most frequented towns, I have been

able to live as solitarily and as retired as in the loneliest deserts.

Fourth Part.

I do not know whether I ought to discuss with you the earlier of my meditations, for they are so metaphysical and so out of the common that perhaps they would not be to every one's taste; and yet, in order that it may be judged whether the bases I have taken are sufficiently firm, I am in some measure constrained to speak of them. I had remarked for long that, in conduct, it is sometimes necessary to follow opinions known to be very uncertain, just as if they were indubitable, as has been said above: but then, because I desired to devote myself only to the research of truth, I thought it necessary to do exactly the contrary, and reject as absolutely false all in which I could conceive the least doubt, in order to see if afterwards there did not remain in my belief something which was entirely indubitable. Thus, because our senses sometimes deceive us, I wanted to suppose that nothing is such as they make us imagine it; and because some men err in reasoning, even touching the simplest matters of geometry, and

make paralogisms, and judging that I was as liable to fail as any other, I rejected as false all the reasons which I had formerly accepted as demonstrations; and finally, considering that all the thoughts which we have when awake, can come to us also when we sleep, without any of them then being true, I resolved to feign that everything which had ever entered into my mind was no more true than the illusions of my dreams. But immediately afterwards I observed, that while I thus desired everything to be false, I, who thought, must of necessity be something; and remarking that this truth, *I think, therefore I am*, was so firm and so assured that all the most extravagant suppositions of the sceptics were unable to shake it, I judged that I could unhesitatingly accept it as the first principle of the philosophy I was seeking.

Then, examining attentively what I was, and seeing that I could feign that I had no body, and that there was no world or any place where I was, but that nevertheless I could not feign that I did not exist, and that, on the contrary, from the fact that I thought to doubt of the truth of other things, it followed very evidently that I was; while if I had only ceased to think, although all else which I had previously imagined had been true, I had no reason to believe that I might have been,

therefore I knew that I was a substance whose essence or nature is only to think, and which, in order to be, has no need of any place, and depends on no material thing; so that this I, that is to say, the soul by which I am what I am, is entirely distinct from the body, and even easier to know than the body, and although the body were not, the soul would not cease to be all that it is.

After that I considered generally what is requisite to make a proposition true and certain; for since I had just found one which I knew to be so, I thought that I ought also to know in what this certainty consisted. And having remarked that there is nothing at all in this, *I think, therefore I am*, which assures me that I speak the truth, except that I see very clearly that in order to think it is necessary to exist, I judged that I might take it as a general rule, that the things which we conceive very clearly and very distinctly are all true, and that there is difficulty only in seeing plainly which things they are that we conceive distinctly.

After this, and reflecting upon the fact that I doubted, and that in consequence my being was not quite perfect (for I saw clearly that to know was a greater perfection than to doubt), I bethought

myself to find out from whence I had learned to think of something more perfect than I; and I knew for certain that it must be from some nature which was in reality more perfect. For as regards the thoughts I had of many other things outside myself, as of the sky, the earth, light, heat, and a thousand more, I was not so much at a loss to know whence they came, because, remarking nothing in them which seemed to make them superior to me, I could believe that if they were true, they were dependencies of my nature, inasmuch as it had some perfection, and if they were not true, that I derived them from nothing—that is to say, that they were in me because I had some defect. But it could not be the same with the idea of a Being more perfect than my own, for to derive it from nothing was manifestly impossible; and since it is no less repugnant to me that the more perfect should follow and depend on the less perfect, than that out of nothing should proceed something, I could not derive it from myself; so that it remained that it had been put in me by a nature truly more perfect than I, which had in itself all perfections of which I could have any idea; that is, to explain myself in one word, God. To which I added that since I knew some perfections which I did not possess, I was not the only

being which existed (I shall here use freely, if you please, the expressions of the school), but that there must of necessity be some other being more perfect, on whom I depended, and from whom I had acquired all that I possessed; for if I had been alone and independent of all other, so that I had of myself all this little whereby I participated in the perfect Being, for the same reason I should have been able to have of myself all the surplus which I believed that I lacked, and thus be infinite, eternal, immutable, all-knowing, almighty, and, in fine, have all the perfections which I could observe in God. For, following the reasons that I have just given, in order to know the nature of God as well as my nature is able to know it, I had only to consider all the things which I have some idea of possessing, whether to possess them were perfection or not, and I was sure that none of those which marked some imperfection were in Him, but that all the others were. For I saw that doubt, inconstancy, sadness, and similar things, could not be in Him, seeing that I myself would have been very glad to be free from them. Then, besides, I had ideas of many sensible and corporeal things; for if I supposed that I was dreaming, and that all things I saw or imagined were false, I nevertheless could not deny that the ideas of them were

indeed in my thought; but because I had already very clearly recognised in myself that the intelligent nature is distinct from the corporeal, and, considering that all composition implies dependence, and that dependence is manifestly a defect, I judged thereby that it could be no perfection in God to be composed of these two natures, and that in consequence He was not so composed; but that if there were any bodies in existence, or even any intelligences or other natures which were not wholly perfect, their being must depend on His power in such wise that without Him they could not subsist one single moment.

After that I desired to seek other truths, and proposing to myself the object of study of the geometers, which I conceived as a continuous body, or a space indefinitely extended in length, breadth, and height or depth, divisible into divers parts, which could have divers shapes and sizes, and be moved or transposed in all manner of ways, I went over some of their simplest demonstrations; and having observed that the great certainty which every one attributes to them is founded only on the fact that they are clearly conceived, according to the rule I have just stated, I noticed also that there was nothing whatever in these demonstrations which assured me of the existence of their

object,—thus, for example, I could plainly see that, supposing a triangle, its three angles must be equal to two right angles, but for all that I did not see anything which assured me that any triangle exists,—while that returning to the examination of the idea which I had of a perfect Being, I found that existence was comprised therein in the same way that it is comprised in the idea of a triangle that its three angles are equal to two right angles, or in the idea of a sphere that all its parts are equally distant from its centre, or even yet more clearly, and that in consequence it is at least as certain that God, who is this perfect Being, is, or exists, as any geometrical demonstration can be.

But that which leads many to persuade themselves that there is difficulty in knowing Him, and even also in knowing what their soul is, is that they never raise their minds above things of the senses, and that they are so accustomed to consider nothing except by imagining it,—which is a mode of thinking specially applicable to material things,—that all which is not imaginable seems to them unintelligible. This is sufficiently shown by the maxim which the philosophers hold in the schools,—that there is nothing in the understanding which has not first been in the senses, where, nevertheless, it is certain that ideas of God and

of the soul have never been, and it seems to me that those who desire to understand them with their imagination, do exactly as if they wished to use their eyes in order to hear sounds or smell odours, except that there is still this difference,—that the sense of sight does not less assure us of the truth of its objects than does the sense of smell or of hearing, while neither our imagination nor our senses can ever assure us of anything if our understanding does not intervene.

Finally, if there are yet any who are not sufficiently persuaded of the existence of God and of their soul by the reasons I have brought forward, I would have them know that all other things of which perhaps they think themselves more sure,—as of their having a body, and the existence of stars, and an earth, and similar things,—are less certain. For although a man have such a moral assurance of these things that it appears to him extravagant to doubt them, yet, when a metaphysical certainty is concerned it cannot reasonably be denied that to have noticed that a sleeping man can in the same way imagine that he has another body, and see many other stars, and another earth, without that any of them exist, would be an adequate reason for not being perfectly sure of it. For whence do we know that the

thoughts which come in dreams are any falser than the others, seeing that they are often no less vivid and positive? And let the best minds study that as much as they please, I do not believe they can give any reason sufficient to remove this doubt, unless they presuppose the existence of God. For in the first place, even that which I have already taken as a rule, to wit, that the things which we conceive very clearly and very distinctly are all true, is certain only because God is or exists, and because He is a perfect Being, and all which is in us comes from Him; whence it follows that our ideas or notions, being real things, and coming from God, inasmuch as they are clear and distinct, cannot therefore be other than true. So that if we frequently have ideas which contain falsehood, they can be only such as include something confused and obscure, because in that they participate in the nothing (*néant*)—that is to say, they are thus confused in us only because we are not all-perfect. And it is evident that it is no less repugnant to us that falsehood or imperfection, being such, should proceed from God, as that truth or perfection should proceed from nothing. But unless we knew that all which is in us of the real and the true comes from a perfect and infinite being, however clear and distinct our ideas might be,

we should have no reason which assured us that they had the perfection of being true.

Then, after the knowledge of God and of the soul has rendered us certain of this rule, it is very easy to recognise that the dreams we imagine when asleep, ought in nowise to make us doubt the truth of the thoughts we have when awake. For if it happened that even while sleeping we had some very distinct idea, as, for example, that a geometer invented some new demonstration, the fact of our sleeping would not prevent its being true; and as to the most ordinary error of our dreams, which is that they represent various objects to us in the same way that our outward senses do, it matters not that it gives us occasion to distrust the truth of such ideas, because the senses also can deceive us just as often without our sleeping,—as when those who have the jaundice see everything yellow, or as the stars or other very remote bodies appear to us much smaller than they are. For in short, whether we wake or whether we sleep, we ought never to let ourselves be persuaded except by the evidence of our reason. And it should be noticed that I say of our reason, and not of our imagination, or our senses; for although we see the sun very clearly, we ought not therefore to judge that it is only of the size we see; and we can indeed

imagine a lion's head on a goat's body without therefore being obliged to conclude that a chimera exists, for reason does not instruct us that that which we see or imagine in this way is true; but it does instruct us that all our ideas or notions ought to have some foundation of truth, for it would not be possible that God, who is all-perfect and all-true, had put them into us otherwise; and because our reasonings are never so clear or so perfect during sleep as during waking, although sometimes our imagination may be then equally or more vivid and positive, it also instructs us that as our thoughts cannot always be true, since we are not all-perfect, such truth as they have must infallibly be met with in those which we have when awake, rather than in our dreams.

Fifth Part.

I should be very glad to go further and to show here the whole chain of other truths which I have deduced from these first; but because for this end I should have to speak of many things which are matters of controversy among the learned, with whom I have no desire to embroil myself, I think I shall do better to refrain,

and merely say generally that they exist, so as to leave wiser heads to judge whether it were profitable that the public should be more particularly informed of them. I have always remained firm in my resolve to assume no other principle but that which I have just used to demonstrate the existence of God and of the soul, and to receive as true nothing which did not seem to me clearer and more certain than the demonstrations of the geometers had done before; and yet I dare affirm that not only have I found within a short time the means of satisfying myself with regard to all the principal difficulties which are usually treated of in philosophy, but also that I have remarked certain laws which God has so established in nature, and of which he has implanted such notions in our souls, that after having duly reflected on them, we cannot doubt that they are exactly observed in all which is or which happens in the world. Then in considering the consequence of these laws, methinks I have discovered many truths more useful and more important than all that I had learned before or ever hoped to learn.

But because I have tried to explain their principles in a treatise[1] which several considera-

[1] The *Treatise on Light*, or *On the World*.

tions prevent me from publishing, I do not know how to make them better known except by here stating summarily what that treatise contains. I had planned to include in it all that I thought I knew before I began to write, touching the nature of material things; but just as painters, who are unable to represent correctly on the flat surface of a picture all the different sides of a solid body, select one of the principal sides which they set in the light, leaving the rest in shadow, and unseen by the spectator, so I, fearing that I should not be able to put into my discourse all that was in my mind, undertook there only to set forth very fully what I understood of light, and to treat, in connection with this subject, of the sun and the fixed stars, because almost all light proceeds from them; of the heavens, because they transmit it; of planets, comets, and the earth, because they reflect it; and especially of all the bodies which are on the earth, because they are coloured, or transparent, or luminous; and finally of man, because he is the spectator thereof; and so as to shade all these things a little, and to be able to state more freely what I believed of them, without being obliged either to follow or to refute the opinions accepted by the learned, I resolved to leave all the present world to their disputes, and to say

only what would happen in a new world, if God were to create somewhere in imaginary space enough matter to compose it, and put the different parts of this matter in various motion and without order, so that He composed thereof a chaos as confused as any the poets can picture, and afterwards lent only His ordinary co-operation to nature and let her act according to the laws which He has established. Thus, in the first place, I described this matter, and tried to represent it so that nothing in the world, it seems to me, is clearer or more intelligible, except what has been said already about God and the soul; for I even expressly assumed that it contained none of the forms or qualities about which they dispute in the schools, nor, in general, anything the knowledge of which is not so natural to our souls that we cannot even feign ignorance of it. Moreover, I showed what were the laws of nature; and basing my reasons on no principle but the infinite perfections of God, I tried to demonstrate all those concerning which a man may have any doubt, and to show that they are such, that, even though God had created many worlds, there could be none where they failed to be observed. Then I showed how, following these laws, the greater part of the matter of this chaos had to dispose and arrange itself in a

certain way which made it like to our firmament; how, moreover, some of its parts had to compose an earth, and some planets and comets, and others a sun, and fixed stars; and here, enlarging on the subject of light, I explained at great length the light that ought to be in the sun and the stars, and how from thence it traverses instantaneously the immense spaces of the heavens, and how it is reflected from the planets and comets to the earth. I also added thereto many things concerning the substance, situation, movements, and all the various qualities of these heavens and stars, so that I thought I said enough about them to show that there is nothing to be observed in the heavens and stars of this world which would not, or at any rate could not, appear likewise in those of the world that I described. From that I came to speak of the earth in particular; how, although I had expressly assumed that God had put no gravity in the matter which composed it, nevertheless all its parts tended exactly towards its centre; how, water and air being on the surface, the disposition of the heavens and the stars, and especially of the moon, must cause a flux and reflux therein, like in all its circumstances to that which is seen in our seas; and also a certain course of water as well as of air, from East to

West, such as is also remarked in the tropics; how the mountains, seas, fountains, and rivers could naturally be formed there, and the metals come into the mines, and the plants grow in the fields, and generally how all the bodies which are called mixed or composite could be generated there. And because that after the stars I knew nothing in the world, except fire, which produces light, I studied, among other things, to make all that pertains to the nature of fire clearly understood; how it is made, how nourished; how it sometimes has heat without light, and sometimes light without heat; how it can introduce colours and various other qualities into different bodies; how it melts some and hardens others; how it can consume them almost entirely, or convert them into cinders and smoke; and finally, how of these cinders, by the very violence of its action, it forms glass; for this transmutation of cinders into glass appearing to me as wonderful as any which occurs in nature, I took especial pleasure in describing it.

At the same time I did not intend to infer from all these things that this world had been created in the way that I had sketched out, for it is much more likely that God made it from the beginning such as it was to be. But it is certain, and this opinion is commonly accepted by theologians,

that the action by which He now maintains the world is the same as that by which He created it: so that even if He had not given it in the beginning any form but chaos, provided that having established natural laws He lent it his co-operation in acting as it is accustomed, we may believe, without slighting the miracle of the creation, that by that alone all purely material things would have been able in time to become such as we now perceive them; and their nature is much easier to understand when we thus see them gradually come into being, than when we merely consider them as ready made.

From the description of inanimate bodies and of plants, I passed to that of animals, especially of men. But because I had not yet enough acquaintance with men to speak of them in the same way as of the rest—that is, by demonstrating effects by causes, and showing from what origins and in what manner nature should produce them, I contented myself with supposing that God had formed the body of a man, exactly like one of ours, both in the exterior shape of the limbs and in the interior conformation of the organs, without composing him of any matter other than that I had described, and without putting in him, at the beginning, a reasonable soul, or anything to serve

as an animate or sensitive soul, except that He excited in his heart one of these fires without light which I had already explained, and which I conceived to be of the same nature as that which kindles hay when it is shut up before it is dry, or which makes new wines boil when they are left to ferment on the stalk. For examining the functions which could consequently be in this body, I found them precisely those which can be in us without our thinking of them, and therefore without our soul—that is to say, this distinct part of our body whose nature, we have said above, is only to think—contributing to them, and which are the same as those wherein we may say that the irrational animals resemble us, without, therefore, being able to find any which, dependent on thought, are the only functions which belong to us as men. But after having assumed that God created a rational soul and joined it to this body in the way that I have described, I found them all there.

But in order that it may be seen how I treated this matter, I will here set forth the explanation of the movement of the heart and the arteries, so that as it is the first and most general which we observe in animals, it may be easily judged therefrom what ought to be thought of all the others. And in order that there may be less difficulty in

understanding what I am going to say, I desire that those who are not versed in anatomy will take the trouble, before reading this, to have dissected before them the heart of some large animal which has lungs, for it is in all respects sufficiently like to that of man, and that they expose the two chambers or cavities which are therein: first, that on the right side, to which correspond two very large ducts, to wit, the hollow vein, which is the principal receptacle of the blood, and like the trunk of a tree, of which all the other veins of the body are the branches; and the misnamed arterial vein, for it is really an artery which, having its origin in the heart, divides, after emerging therefrom, into numerous branches which spread throughout the lungs: then that on the left side, to which in the same way correspond two ducts which are as large or larger than the preceding, to wit, the venous artery, which is also misnamed, since it is only a vein which comes from the lungs, where it is divided into many branches, interlaced with those of the arterial vein and the passage called the windpipe, by which enters the air of respiration; and the great artery, which, emerging from the heart, sends its branches throughout the body. I would also like carefully pointed out to them the eleven little

valves, which, like so many little doors, open and close the four openings which are in the two cavities: to wit, three at the entrance to the hollow vein, where they are so disposed that they can in no way hinder the blood it contains from running into the right cavity of the heart, and at the same time exactly prevent its going out of it; three at the entrance to the arterial vein, which, being disposed quite contrarily, permit the blood to pass from this cavity into the lungs, but not that which is in the lungs to return there; and two others at the entrance to the venous artery, which allow the blood from the lungs to enter the left cavity of the heart, but stops its return; and three at the entrance to the great artery, which permit it to leave the heart, but prevent its returning. And it is unnecessary to seek any other reason for the number of these valves, except that the opening of the venous artery, being oval, from its locality, can be conveniently closed with two, while the others, being round, can be closed better with three. Again, I would have them consider that the great artery and the arterial vein are of a much harder and firmer substance than the venous artery and the hollow vein; that these last become wider before entering the heart, and are there like two sacs, called the auricles of the heart,

composed of a flesh similar to that of the heart; that there is always more heat in the heart than in any other part of the body, and lastly, that this heat, if it enter some drop of blood in the cavities, is capable of making it distend and dilate, as all liquids generally do when allowed to fall drop by drop into some very hot vessel.

Now, after that, I have no need to say anything else to explain the movement of the heart, except that when its cavities are not full of blood, some of necessity runs from the hollow vein into the right, and from the venous artery into the left cavity, inasmuch as these two vessels are always full and their openings, which are directed towards the heart, cannot then be obstructed. But immediately two drops of blood have thus entered, one into each cavity, these drops—which must be very large, because the openings through which they enter are very large, and the vessels whence they come very full of blood—are rarefied and dilate because of the heat they there encounter, by means of which, inflating the whole heart, they push and close the five little doors at the openings of the two vessels whence they come, thus preventing any more blood from flowing into the heart, and continuing to rarefy themselves more and more, they push and open the six other little

doors which are at the entrances of the two other vessels by which they go out, by this means inflating all the branches of the arterial vein and of the great artery almost at the same instant as the heart, which immediately after subsides, as do also these arteries, because the blood which has entered cools, and their six little doors close, and the five of the hollow vein and venous artery reopen, and give passage to two other drops of blood, which make the heart and arteries dilate over again as before. And because the blood which thus enters the heart passes by the two sacs called the auricles, their movement is contrary to the heart's, and when it distends they subside. Further, in order that those who do not know the force of mathematical demonstrations and are not accustomed to distinguish true reasons from probable ones, may not venture to deny this without investigating it, I wish to inform them that the movement I have just explained comes as necessarily from the particular disposition of the organs which can be seen in the heart by the eye, and from the heat which can be felt with the fingers, and from the nature of the blood which can be known by experiments, as does that of a clock from the force, the situation, and the shape of its balance and its wheels.

But if it be asked how it is that the blood in the veins is not exhausted in running thus continually into the heart, and that the arteries are not overcharged with it, since all that which passes through the heart flows through them, I need only advance in reply what has been written already by an English physician (Hervæus, *De motu cordis*), to whom we must give the praise of having broken the ice in this matter, and of being the first to teach that there are numerous little passages at the extremities of the arteries, by which the blood received from the heart enters into the little branches of the veins, whence it flows over again into the heart, so that its course is only a perpetual circulation. This he proves extremely well, by the ordinary experience of the surgeons, who, having tied the arm fairly tightly above the place where the vein is opened, make the blood flow out of it more abundantly than if it had not been tied; while if, on the contrary, they tied it below, between the hand and the opening, or if they tied it very tightly above, just the opposite would happen. For it is plain that the moderately tight ligature, though able to prevent the blood already in the arm from returning towards the heart through the veins, does not therefore prevent it continually running in afresh through the arteries,

because they are situated below the veins, and their coats being harder, are less easy to press, and the blood which comes by them from the heart tends to pass to the hand more forcibly than to return from thence by the veins to the heart; and since this blood comes from the arm by an opening in one of the veins, there must necessarily be some passages below the bond—that is, towards the extremities of the arm, by which it can enter the veins from the arteries. He also proves well what he says about the course of the blood, by certain little valves so disposed in various places along the veins, that they do not permit it to pass by them from the middle of the body to the extremities, but only to return from the extremities to the heart; and proves it, moreover, by the experiment which shows that all the blood in the body can leave it in a very little time by one artery when it is opened, even though it be very tightly bound near the heart, and cut between it and the ligature, so that there would be no reason to imagine that the blood which issued from it came from anywhere else.

But there are many other things which testify that the true cause of this movement of the blood is what I have said: for, in the first place, the difference between the blood which comes from

the veins and that which comes from the arteries, is solely because that, having been rarefied and as it were distilled in passing through the heart, it is warmer and quicker and more lively immediately after leaving it, that is, when in the arteries, than it is a little before entering it, that is, when in the veins; and if care is observed it will be found that this difference only appears plainly near the heart, and not so much in the parts more remote from it. Then the hardness of the substances of which the arterial vein and the great artery are composed shows plainly that the blood beats against them with more force than against the veins. And why should the left cavity of the heart and the great artery be ampler and larger than the right cavity and the arterial vein, were it not that the blood of the venous artery, having been only in the lungs since passing out of the heart, is more subtle, and rarefies itself more completely and easily than that which comes immediately from the hollow vein? And what can doctors discover by testing the pulse, if they do not know that according as the blood changes its nature it can be rarefied by the heat of the heart more or less vigorously and more or less quickly than before? And if we inquire how this heat communicates itself to the other members, must it

not be acknowledged that it is by means of the blood, which, passing through the heart, is again warmed there and spreads thence all over the body; so that if blood be taken from any part, heat is taken by the same means, and although the heart were as ardent as a red-hot iron, it would not suffice to warm the feet and the hands to the extent it does, if it did not continually send new blood to them. Then that shows us also that the true purpose of respiration is to bring enough fresh air into the lungs to make the blood which comes into them from the right cavity of the heart, where it has been rarefied and as if changed into vapours, to condense and be converted once more into blood before falling back into the left cavity, without which it would not fitly serve to feed the fire which is there. This is confirmed when we see that animals which have no lungs have also but one cavity in the heart, and that unborn children, which cannot use them, have an opening by which the blood runs from the hollow vein into the left cavity of the heart, and a duct by which it comes from the arterial vein into the great artery without passing by the lung. Then how does digestion proceed in the stomach, if the heart does not send heat thither by the arteries, and with it some of the most fluid parts of the blood, which aid in

dissolving the food there? And is it not easy to recognise the process which converts the juice of this food into blood, if we consider that it is distilled, in passing and repassing through the heart, perhaps more than a hundred or two hundred times a day? And what else do we need to explain nutrition, and the production of the various humours of the body, except that the force with which the blood in rarefying itself passes from the heart towards the extremities of the arteries, makes some of its parts to stop among those of the members where they are, and there take the place of some others which they drive out, and that according to the situation or the shape or the smallness of the pores that they meet with, some, rather than others, tend to flow into certain places, just as every one may have noticed in the case of sieves, which, being variously pierced, serve to separate different grains? And lastly, what is most remarkable in all this is the generation of animal spirits, which are like a very subtle wind, or rather a very pure and very lively flame, which, continually mounting in great abundance from the heart to the brain, flows from thence through the nerves in the muscles, and gives motion to all the members; and we need not imagine any other cause which makes those parts of the blood which,

being the most agitated and penetrating, are the fittest to compose these spirits, to flow towards the brain rather than elsewhere, except that the arteries which carry them thence are those which come more directly from the heart than the rest; and that according to the rules of mechanics, which are the same as those of nature, when many things tend to move together towards the same part where there is not enough room for all, as when the parts of the blood which come from the left cavity of the heart tend towards the brain, the weaker and less agitated must be turned aside by the stronger, which thus proceed there alone.

I had sufficiently explained all these things in the treatise which at one time I thought of publishing. And then I showed there what the fabric of the nerves and muscles of the human body must be in order to make the animal spirits within them have strength to move their members, as when we see that heads, a little while after being cut off, still move and bite the earth, although they are no longer animated; what changes must take place in the brain to cause waking, and sleep, and dreams; how light, sounds, odours, tastes, heat, and all other qualities observed in exterior objects can impress their different ideas through the inter-

vention of the senses; how hunger, thirst, and the other inward passions can also do the like; what must be understood by common sense, by which these ideas are received, by memory, which preserves them, and by the fancy which can diversely change them and compose new ones of them, and by the same means, distributing the animal spirits in the muscles, make the members of this body to move in as many different fashions, and as appropriately to the objects presented to its senses, and to its inward passions, as our members can move without the agency of the will. This will appear in nowise strange to those who, knowing how many different *automata*, or moving machines, man's industry can fashion out of but very few pieces compared with the great number of bones, muscles, nerves, arteries, veins, and all the other parts of the body of every animal, will consider this body as a machine which, having been made by the hands of God, is incomparably better ordered and has of itself motions more wonderful than any which men can invent. And I here specially paused to show that if there were machines which had the organs and the exterior shape of a monkey, or some other irrational animal, we should have no means of recognising that they were not in all respects of the same

nature as these animals; while if there were any which resembled our own bodies, and could imitate our actions as far as should be morally possible, we should always have two very certain means of recognising that, nevertheless, they were not real men. The first is, that they could never make use of words, or of other signs of the kind, as we do to declare our thoughts to each other; for it is easy to conceive that a machine could be made so that it uttered words, and even uttered some which were appropriate to corporal actions which should cause some change in its organs, as, for instance, if it were touched in some part so that it demanded what you wish to say to it; or in another, so that it cried out that you hurt it, and so on; but it is not conceivable that it would arrange them variously, so as to respond to the meaning of everything that should be said in its presence, as the most stupid men are able to do. And the second is, that although they might do many things as well as any of us, or perhaps better, they would infallibly be wanting in others, by which we should see that they did not act by knowledge, but merely after the disposition of their organs: for while reason is a universal instrument, applicable in every sort of circumstance, these organs have need of some particular arrangement

for each particular action; so that it is morally impossible that there could be a sufficient variety of them in one machine to make it act upon every occasion of life in the same way as our reason makes us act. And by these two means we can also know the difference between men and beasts; for it is a remarkable thing that there are no men so doltish and stupid, not excepting even the insane, that they are incapable of arranging together different words and composing thereof a discourse by which they make their thoughts understood; while on the contrary, no other animal, however perfect and excellent it may be born, does the like. This is not because they lack the organs, for we see that pies and parrots can utter words as well as we, and yet cannot speak like us, that is to say, showing that they are thinking of what they are saying; while men who, being born deaf and dumb, are deprived of organs which others use for speech, as much as or more than animals are, are accustomed to invent signs by which they make themselves understood by those who, being generally with them, have leisure to learn their language. And this shows not only that animals have less reason than men, but that they have none at all, for we see that very little is needed to know how to speak; and since we remark inequality among

animals of the same species as well as between men, and since some are easier to train than others, it is not credible that a monkey or parrot, if it were one of the most perfect of its kind, would not equal in that one of the stupidest of children, or at least a child of dull intellect, were their soul not of a nature wholly different from ours. And we should not confound words with the natural movements which testify to the passions and can be imitated by machines as well as by animals, or think, like some of the ancients, that beasts speak, although we do not understand their language; for if it were true, since they have many organs corresponding to ours, they could as well make themselves understood by us as by their fellows. It is also a very remarkable thing, that, although there are many animals which exhibit more industry than we in some of their actions, we observe, nevertheless, that in many others they exhibit none at all, so that what they do better than we does not prove that they have more intelligence,—for at this rate they would have more than any of us, and would be better in everything else,—but rather that they have none, and that it is nature acting in them according to the arrangement of their organs; just as we see that a clock, which is composed only of wheels and springs, can count

the hours and measure time more accurately than we with all our wisdom.

After that I described the reasonable soul, and showed that it can in nowise be drawn from the power of matter, like the other things of which I had spoken, but must be specially created; and how it is not sufficient that it be lodged in the human body like a pilot in his boat, except perhaps to animate its members, but that it must be joined and united more closely with it, in order to have in addition sentiments and appetites like ours, and thus to compose a real man. I also enlarged somewhat on the subject of the soul, because it is one of the most important; for after the error of those who deny God,—which I think I have sufficiently refuted above,—there is none more likely to divert weak minds from the narrow path of virtue than that of imagining that the soul of beasts is of the same nature as ours, and that consequently we have nothing more to fear or to hope, after this life, than have flies and ants: while on the other hand, when we know how they differ, we more clearly understand the reasons which prove that ours is of a nature entirely independent of the body, and consequently not liable to die with the body; and then, inasmuch as we see no other causes which destroy it,

we are naturally disposed to judge thereby that it is immortal.

Sixth Part.

It is now three years since I reached the end of the treatise which contained all these things, and began to revise it in order to put it into the hands of a printer, when I learned that certain persons to whom I defer, and whose authority over my actions is hardly less than that of my own reason over my thoughts, had disapproved an opinion of physics published a little while before by some one else[1]; and though I will not say that I held this opinion, before they censured it I had noticed nothing in it which I could imagine prejudicial either to religion or to the state, and which, consequently, might prevent me from writing it, had reason persuaded me to it; and that made me fear that there might in like manner be some among my opinions in which I was mistaken, notwithstanding the great care I had always taken to receive no new ones into my belief concerning which I had not had very certain demonstrations, and to write nothing which might turn to any one's disadvantage.

[1] The theory of the earth's motion. See Introduction, p. xx.

This was sufficient to constrain me to change the resolve I had made to publish them; for although the reasons for which I had first made this resolve were very strong, my inclination, which has always led me to hate the business of bookmaking, immediately led me to find as many others for excusing myself from it; and these reasons on one side and the other are such that not only have I some interest in stating them, but it may be also that the public has some interest in knowing them.

I have never made much account of the things which come from my mind, and while I have gathered no fruits from the method I employ, except that I have satisfied myself concerning certain difficulties belonging to the speculative sciences, and also that I have tried to govern my morals by the reasons which it teaches me, I have not felt obliged to write anything about it. For regarding matters of morals, each has so much in his mind that one could find as many reformers as heads, if it were permitted to others, as it is to those whom God has set up as rulers over His peoples, or to whom He has given sufficient grace and zeal to be prophets, to undertake to change anything; and although my speculations greatly pleased me, I believed that others also had

speculations which perhaps pleased them more. But as soon as I had acquired some general notions concerning physics, and when, beginning to test them in divers difficult particulars, I remarked whither they might lead, and how they differed from the principles in present use, I believed that I could not keep them concealed without greatly sinning against the law which obliges us to procure as much as lieth in us the general good of all men, for they have shown me that it is possible to arrive at knowledge which is very useful in life, and that instead of the speculative philosophy which is taught in the schools, a practical philosophy may be found, by means of which, knowing the power and the action of fire, water, air, stars, heavens, and all the other bodies which environ us, as distinctly as we know the various trades and crafts of our artisans, we might in the same way be able to put them to all the uses to which they are proper, and thus make ourselves, as it were, masters and possessors of nature. This is to be desired, not only for the invention of an infinitude of artifices which would allow us to enjoy without trouble the fruits of the earth and all its commodities, but principally for the conservation of health, which is without doubt the first good, and the foundation of all the other

good things of this life: for even the mind depends so greatly on the temperament and disposition of the bodily organs, that if it be possible to find some means of making men generally wiser and cleverer than they are, I believe that it is in medicine that it must be looked for. It is true that the physics now in use contain few things whose utility is so remarkable; but without any intention of despising them, I am sure there is no one, even of those who make them their profession, who does not acknowledge that all which is known of them is almost nothing in comparison with what remains to be known; and that we could free ourselves from an infinity of ills, of the body as well as of the mind, and even, perhaps, from the weakening which comes with age, if we had an adequate knowledge of their causes, and of all the remedies with which nature has provided us. Now having designed to spend my whole life in the search for so indispensable a science, and having come across a way which seemed to me such as must infallibly lead to it, if one were not hindered from following it by the brevity of life or for want of experiments, I judged that there was no better remedy against these two obstacles than to communicate faithfully to the public all of the little I had found, and to urge people of intelligence to

try to proceed further by contributing, each according to his inclination and power, to the necessary experiments, and by making known to the public all the things they should learn, so that, the last beginning where the preceding had left off, and thus joining the life and the labours of many, we might all together advance much further than each individual by himself could do.

I remarked also, with regard to experiments, that the further a man is advanced in knowledge, so much the more are they necessary. For to begin with, it is better to use only the experiments which present themselves to the senses, and which cannot remain unknown to us, if we reflect on them even ever so little, than to seek others rarer and more elaborate, for the reason that these rarer ones often deceive, when the causes of the commoner are yet unknown, and that the circumstances on which they depend are almost always so special and so minute that it is very difficult to observe them. But the order that I have observed here has been as follows: first, I have tried to find generally the principles or first causes of all which is or can be in the world, without taking anything into consideration for this purpose except that God has created it, and drawing them only from

certain germs of truth which are naturally implanted in our souls. Then I examined what primary and most ordinary effects can be deduced from these causes; and it appears to me that I have thereby found heavens, stars, an earth, and even on the earth water, air, fire, minerals, and certain others of the commonest things and the most simple, and consequently the most easy to know. Then when I desired to proceed to those which are more particular, so many difficult ones presented themselves that I did not believe it possible for the human mind to distinguish the forms or species of bodies which are on the earth, from an infinity of others which could be there if such had been God's will; or, consequently, to bring them down to our use, except by anticipating the causes through the effects, and making use of many particular experiments. Following this, and running my mind over all the objects which had ever presented themselves to my senses, I indeed venture to affirm that I remarked nothing among them which I could not quite suitably explain by the principles which I had found. But I must also acknowledge that the power of nature is so wide and so vast, and these principles so simple and so generous, that I

noticed even more specially, that there was hardly any particular effect which I did not recognise at first sight to be deducible from them in many different ways; and that my greatest difficulty generally is to find in which of these ways it depends on them; for I know no other means of doing that than to seek again some experiments which are such that their result is not the same if it has to be explained by one of these ways as when it has to be explained by another. Besides, it seems to me that I am sufficiently advanced to see plainly enough what standpoint one ought to take for carrying out the majority of the experiments which can serve this purpose; but I also see that they are of such a nature, and so numerous, that neither my hands nor my income, though they were a thousand times more than they are, can suffice for them all: so that in measure as I shall henceforward have the means of carrying them out, so I shall advance in the knowledge of nature. I resolved to make this known in the treatise I had written, and to show so clearly the benefit that the public might receive from it that I should oblige all those who desire the general good of men, that is to say, all those who are virtuous in deed and not in pretence or in opinion only, to communicate

to me such experiments as they had already made, as well as to aid me in the research of those yet to be carried out.

But since that time I have had other reasons which have led me to change my mind, and believe that I ought indeed to continue to write all the things which I judged of importance, in measure as I discovered their truth, and to use therein the same care as if I wished to have them printed; as much in order that I might have the more occasion to examine them well—for undoubtedly we always give more attention to that which we believe must be seen by many than that which we do only for ourselves (and often things which seemed to me true when I first conceived them, have appeared false when I wished to set them down on paper)—as that I might lose no occasion of benefiting the public, if I am capable of doing so, and that if my writings are worth anything, those who shall have them after my death may use them as shall be most appropriate. But I believed, also, that I ought in nowise to consent to their publication during my life, so that neither the opposition and controversies to which perhaps they would be subject, nor even such reputation as they might win me, should cause me to waste the time that I proposed to employ in self-instruction. For although it is

true that each man is bound to procure the good of others as much as lieth in him, and that, strictly speaking, to be useful to no one is to be worthless, yet it is also true that our care ought to extend beyond the present time, and that it is well to omit things which might bring perhaps little profit to the living, when it is proposed to undertake others which shall bring greater profit to posterity. For indeed I much wish it to be known, that the little I have learned up to now is almost nothing in comparison with that of which I am ignorant, and which I do not despair of being able to learn; for it is almost the same with those who little by little discover truth in the sciences, as with those who, beginning to grow rich, have less difficulty in making great acquisitions than they formerly had, when poorer, in making others much smaller. Or they can be compared to the heads of an army, whose forces are accustomed to grow in proportion to their victories, and who need more generalship to maintain themselves after losing a battle, than in taking towns and provinces after gaining one. For to try to vanquish all the difficulties and errors which hinder us from attaining to the knowledge of truth, is truly to give battle; and to accept some false opinion touching a matter somewhat general and important is to lose the day: much

more address is needed afterwards to reinstate oneself as before, than is necessary to make great progress when one already has assured principles. For my own part, if I have heretofore found some truths in the sciences (and I hope that the things contained in this volume will show that I have found some), I can say that they are only sequences and dependents of five or six principal difficulties which I have surmounted, and which I count as so many battles in which the victory has been on my side. I shall not fear, even, to say that I think I have to gain but two or three others of the same kind in order to entirely achieve the purpose of my designs, and that my age is not so advanced that, in the ordinary course of nature, I may not yet be able to have sufficient leisure to attain this end. But because I have hope of being able to employ it well, I feel the more obliged to husband the time that remains to me, and I should undoubtedly have many occasions of wasting it, if I made known the foundations of my physics. For although they are nearly all so evident that they have only to be heard to be believed, and although there are none of them which I do not think myself able to demonstrate, at the same time, because it is impossible for them to be in harmony with all the various opinions of other men, I foresee that I

should be often turned aside by the opposition to which they would give rise.

It may be said that this opposition would be useful in showing me my faults as well as in making whatever good there might be in my work better understood, and that since many can see more than one, others who begin from now to make use of it might also aid me with their inventions. But though I am aware that I am extremely liable to fail, and although I hardly ever put trust in the first thoughts that come to me, yet my experience of the objections which might be made to me prevents my hoping for any profit from them; for I have already often tested the opinions of those whom I counted as my friends, as well as of some others to whom I thought I was indifferent, and even also of some whose malignity and envy I knew would try to discover that which affection hid from my friends; but it has rarely happened that they have offered me any objection which I had not in some measure foreseen, so long as it were not too remote from my subject; so that I met with hardly any censor of my opinions who did not seem to me either less strict or less equitable than myself. Moreover, I had never observed that the disputes carried on in the schools led to the discovery of

any truth which was not known before, for while each struggles to prevail they exert themselves much more in justifying probability than in weighing the reasons on one side and the other; and those who have been for a long time good advocates are not on that account the better judges subsequently.

As to the benefit which others might receive from the communication of my thoughts, it also could not be very great, more especially as I had not yet conducted them so far but that many things needed to be added thereto before putting them into practice. And I think I may say, without vanity, that if there is any one who is capable of this, it should be I rather than another; not that there may not be in the world many minds incomparably better than mine, but because a man cannot so well conceive a thing, and make it his own, when he learns it from another, as when he finds it out for himself. This is so true in this present matter, that although I have often explained some of my opinions to persons of very great intelligence, who while I was speaking appeared to comprehend them perfectly, I have noticed that they have almost always changed them in such a manner that I could no longer own them as mine. Whereupon I gladly take

this opportunity to beg those who shall come after us never to believe that the things which they are told come from me, unless I have divulged them myself: and I am in nowise astonished at the extravagances attributed to all the old philosophers whose writings have not come down to us, nor do I on that account judge that their thoughts were so very unreasonable, seeing that these philosophers were the greatest minds of their time, but only that we have misrepresented them. For we see also that it has hardly ever happened that they have been surpassed by any of their disciples; and I am sure that the most devoted of those who now follow Aristotle would esteem themselves fortunate if they had as much acquaintance with nature as he, even though it were on condition that they never had more. They are like the ivy, which never mounts higher than the trees which support it, and which even descends again after having arrived at their summit; for it seems to me that they also descend again, that is to say, render themselves in some way less wise than if they abstained from study, who, not content with knowing all that is intelligibly explained in their author, wish in addition to find the solution of many difficulties of which he says nothing and of which perhaps he has never thought. Yet their

method of philosophising is very convenient for those who have but mediocre minds; for the obscurity of the distinctions and principles which they employ enables them to speak of all things as boldly as if they had knowledge of them, and sustain all that they say against the more subtle and skilful, without there being any means of convincing them; in which they seem to me like a blind man, who, in order that he may fight one who sees on equal terms, would cause him to enter the depths of some very dark cave: and I may say that these people have interest in my abstaining from publishing the principles of the philosophy which I employ; for being, as they are, very simple and very evident, I should do almost the same by publishing them as if I opened some windows and admitted daylight into the cave whither they have descended to fight. But even the best minds have no occasion to desire to become acquainted with them; for if they wish to speak about everything and to acquire the reputation of being learned, they would attain to it more easily by contenting themselves with probability, which can be found without much difficulty in all sorts of matters, than by searching for the truth, which only reveals itself little by little in some, and when it is a question of speaking of other matters obliges a

man to confess frankly that he is ignorant of them. But if they prefer an acquaintance with a little truth to the vanity of appearing to be ignorant of nothing, which without doubt is far more desirable, and if they wish to follow a plan similar to mine, there is no need for me to say to them any more than I have already said in this discourse. For if they are capable of advancing further than I have done, with much greater reason will they be capable also of finding for themselves all which I believe I have found; seeing that as I have never examined anything but by this method, it is certain that that which yet remains for me to discover is of itself more difficult and obscure than that which I have been enabled to encounter hitherto, and they would have much less pleasure in learning it of me than of themselves: besides which, the habit that they will acquire of seeking easy things first and passing little by little by degrees to others more difficult, will serve them more than all my instructions can do. As for me, I am persuaded that if from my youth I had been taught all the truths whose demonstrations I have since sought out, and if I had had no difficulty in learning them, I should perhaps never have known any others, and that at any rate I should never have acquired the habit and facility which I believe I

have of finding new ones, in measure as I apply myself to searching them out. And in a word, if there is any work in the world which could not be so well finished by any other, as by him who began it, it is this at which I am labouring.

As regards the experiments which can serve this purpose, it is true that one man alone would not be able to make them all; but neither would he be able usefully to employ any other hands than his own, except those of artisans, or such people as he could pay, and whom the hope of gain—which is of great efficacy—would lead to perform more accurately all the things that he prescribed to them. For voluntary workers, who through curiosity or desire to learn may offer themselves to help him, besides giving, as a rule, more promise than performance, and only making fine propositions of which none ever succeed, would certainly be paid by the explanation of difficulties, or at any rate by compliments and useless conversations, which would cost him the loss of time, however little he devoted to them. And as for the experiments which others have already made, even if they would communicate them to him (which the people who call them secrets never will do), they are composed for the most part of so many circumstances, or super-

fluous ingredients, that it would be very difficult for him to disentangle the truth from among them; besides which he will find them nearly all so badly set forth, or even so inaccurate, because those who have made them have struggled to make them appear conformable to their principles, that if there were any which might be useful to him, they would not repay him for the time that he must employ in selecting them. So that if there were any one in the world who was known for certain to be capable of finding the greatest things, and the most useful to the public that can be, and if for this reason others endeavoured by every means to aid him in achieving his designs, I do not see that they could do anything for him but furnish funds for the experiments of which he would stand in need, and prevent his being deprived of his leisure by any person's importunity. But besides that I do not presume so far as to wish to promise anything extraordinary, or feed on thoughts so vain as to imagine that the public should greatly interest itself in my plans, I have not so base a mind as to accept any favour which I might not be considered to have merited

All these considerations together were the cause that, for three years, I would not divulge the treatise which I had in hand, and even resolved

that as long as I lived I would set forth no other treatise which was as general, or from which the bases of my physics could be understood; but there have since been two other reasons which have obliged me to add here some special essays, and to render to the public some account of my actions and of my plans. The first is, that if I failed therein, many who knew my former intention of having certain writings printed, might imagine that the causes for which I abstained therefrom would be more to my disadvantage than they are. For though I like not an excess of glory, or even, if I dare say so, though I hate it, inasmuch as I consider it destructive of repose (which I value above all things), yet, also, I have never tried to conceal my actions as if they were crimes, nor have I taken many precautions to remain unknown, because I thought I should do myself wrong, as well as because it would have given me a sort of disquietude which, again, would hinder the perfect peace of mind which I sought, and because, having always remained indifferent as to whether I was known or unknown, I have been unable to avoid acquiring some sort of reputation, I have thought that I ought at least to do my best to avoid having a bad one. One other reason which has constrained me to write this is, that

seeing more and more every day the delay which my plan of instructing myself suffers, because of an infinity of experiments of which I have need, and which it is impossible for me to make without the aid of others, although I do not flatter myself so much as to hope that the public may share my interests, yet, also, I will not be so untrue to myself as to give cause to those who shall survive me some day to reproach me that I could have left them many much better things than I shall have done, if I had not too much neglected to make them understand in what they might be able to contribute to my designs.

I also reflected that it was easy for me to choose certain matters which, without being open to great controversy, or obliging me to declare more of my principles than I desired, would not fail to show clearly enough what I could do, or could not do, in the sciences. I cannot say whether I have succeeded in this, and I do not wish to anticipate any one's opinions in speaking of my own writings; but I shall be very glad if people will examine them, and in order that they may have more opportunity of doing so, I pray all those who shall have any objections to make to them to take the trouble to send them to my bookseller, being advised by whom I shall try at the same time

to add my replies to them: and by this means the readers, seeing both together, will judge more easily of the truth; for I do not promise ever to make long responses to these objections, but only to acknowledge my faults very frankly, if I recognise them, or, if I cannot perceive them, to state simply what I believe requisite for the defence of the things I have written, without setting forth any new matter in addition to them, so as not to endlessly entangle the one in the other.

But if some of those of which I have spoken at the beginning of the *Dioptrics* and the *Meteors* should begin by giving offence, because I call them suppositions, and because I do not appear anxious to prove them, let the reader have the patience to read the whole attentively, and I hope that he will be satisfied with it; for it seems to me that the reasons there succeed each other in such a manner that as the last are demonstrated by the first, which are their causes, so these first are reciprocally demonstrated by the last, which are their effects. Nor should it be imagined that I there commit the error known to logicians as a circle; for, as experience renders the majority of these effects very certain, the causes from which I deduce them serve not so much to prove them as to explain them, but, on the contrary, it is they which are proved by

them. And I have called them suppositions only that it may be known that I think I can deduce them from the first truths which I have explained above, but that I have expressly wished not to do so, to prevent certain minds (which imagine that they know in a day all that another has thought in twenty years, as soon as he has told them but two or three words of it, and which are so much the more liable to fail, and less capable of the truth, as they are the more penetrating and quick) from taking occasion therefrom to build some extravagant philosophy upon what they believe to be my principles, and attribute its faults to me. As for the opinions which are entirely my own, I do not apologise for them as new, especially as I am certain that if the reasons for them be well considered, they will be found so simple, and so conformable to common sense, that they will appear less extraordinary and less strange than any others which can be held on the same subjects. Nor do I boast of being the first inventor of any, but that I have never accepted them, either because others have said them or because others have not said them, but only because reason has persuaded me of them.

But if the workmen cannot so soon execute the invention which is explained in the *Dioptrics*, I do

not think that it can therefore be said that it is bad; for, seeing that skill and practice are necessary to make and adjust the machines I have described, so that nothing may be wanting, I would be no less astonished if they managed it at the first attempt than if a man were able to play the lute excellently merely because he had been given the correct tablature. And if I write in French, which is the language of my country, rather than in Latin, which is that of my preceptors, it is because I hope that those who use only their pure natural reason will judge my opinions better than those who merely believe ancient books; and because I am sure that those who join good sense to scholarship, whom alone I wish to have as my judges, will not be so partial to Latin as to refuse to hear my reasons because I express them in the vulgar tongue.

Moreover, I will not speak here in detail of the progress in the sciences which I hope to make in the future, or engage myself to the public by any promise which I am not sure of fulfilling. I will only say that I have resolved to employ the time remaining to me to live, in simply trying to acquire some knowledge of nature which shall be such that there may be drawn from it more certain rules for medicine than those which we

have possessed up to the present; and that my inclination is so averse from all other sorts of design, especially from such as can be useful to some only by injuring others, that if any occasion obliged me to employ them I do not believe I should be able to succeed in them. And also, I hereby declare that I am well aware that I am unable to make myself renowned among men, but, also, I have no desire to be so; and I shall always hold myself more obliged to those by whose favour I enjoy my leisure undisturbed, than I should be to any who offered me the most honourable employments in the world.

END OF THE DISCOURSE ON METHOD.

METAPHYSICAL MEDITATIONS.

METAPHYSICAL MEDITATIONS

CONCERNING THE FIRST PHILOSOPHY.

To the Dean and Doctors of the Sacred Faculty of Theology of Paris.

Sirs,

The reason which leads me to present this work to you is so appropriate, and when you know its purpose I am sure that you also will have so good a one for taking it under your protection, that I think I cannot better commend it to you than by telling you in a few words what I have here proposed to do.

I have always deemed the two questions of God and of the soul the chief among those matters which ought to be demonstrated by reasons of philosophy rather than of theology; for although it is enough for us who are faithful to believe, through the Faith, that there is a God, and that the human soul does not die with the body, it certainly does not seem possible that we can ever persuade infidels to any religion, or even to any

moral virtue, if we do not first prove these two things to them by natural reason; especially since (as frequently in this life greater rewards are offered for vices than for virtues) few would prefer the right to the profitable, were they not restrained either by the fear of God, or by the expectation of another life; and although it be absolutely true that we must believe that there is a God, because it is thus taught in the Holy Scriptures, and further, that we must believe the Holy Scriptures because they come from God (the reason for which is that faith being a gift of God, the same God who gives us grace to believe the other things can also give us grace to believe that He exists), we nevertheless cannot offer this to infidels, who would be able to imagine that we thereby committed the fault which logicians call a circle. And indeed, I have observed that you, Sirs, with all the theologians, are not only sure that the existence of God can be proved by natural reason, but also that we infer from Holy Scripture that the knowledge of Him is much clearer than our knowledge of many created things; in fact, that it is so easy that those who have it not are guilty, as appears by these words in WISDOM, *Chap. xiii., where it is said* that their ignorance is not pardonable; for if their mind had pene-

trated so deeply into worldly knowledge, how is it possible that they have not thereby more easily recognised the sovereign Lord? *And* [*in the epistle*] *to the Romans, Chap. i., it is said that they are* without excuse. *Again, in the same place, from these words,* that which is known of God is manifest in them, *we seem to be warned that all that can be known of God can be shown by reasons which need be drawn from nowhere but from ourselves, and from the simple consideration of the nature of our spirit.*

This is why I believed that it would not be contrary to the duty of a philosopher if I showed here how, and in what way, without going further than ourselves, we can know God more easily and certainly than we know the things of the world. And as regards the soul, although many have believed that it is not easy to know its nature, and some have even dared to say that human reasons convince us that it will die with the body; and that there was but one Faith which taught us the contrary; nevertheless, inasmuch as the Lateran Council held under Leo X., in the eighth session, condemns them, and expressly orders Christian philosophers to reply to their arguments, and to use all the power of their minds to make known the truth, I have indeed ventured to

undertake it in this writing. Moreover, knowing that the principal reason which makes many impious persons not to wish to believe that there is a God, and that the human soul is distinct from the body, is that they say that up to the present no one has been able to demonstrate these two things,—although I am not of their opinion, but, on the contrary, hold that the greater part of the reasons brought forward by so many great persons touching these two questions are so many demonstrations when plainly understood, and that it is almost impossible to invent new ones,—I believe that nothing more useful can be done in philosophy than to carefully seek out these last and dispose them in so clear and exact an order that it may be incontestable henceforth before all the world that they are veritable demonstrations. And finally, inasmuch as many persons have desired me to do this, who are aware that I have cultivated a certain method of solving all sorts of difficulties in the sciences, a method which verily is not new, there being nothing more ancient than truth, but which they know I have employed very happily on other occasions, I thought it was also my duty to put it to the test in a matter of such importance.

Now I have worked my hardest to include in this

treatise all that I have been able to discover by means of this method. Not that I have collected here all the different reasons which might be adduced as proofs for so great a subject, for I have never believed that to be necessary, except when none of them are certain, but I have only treated the first and principal ones in such a manner that I indeed venture to offer them as very evident and very certain demonstrations; and moreover, I will affirm that they are such that I do not think there is any way by which the human mind can discover better, for the importance of the subject, and the glory of God, to which all this is related, constrains me to speak here of myself rather more freely than I am accustomed to do. Yet, whatever certainty and evidence I find in my reasons, I cannot persuade myself that every one is capable of understanding them. But as in geometry there are many which have been left to us by Archimedes, Apollonius, Pappus, and numerous others, which are accepted by every one as very certain and very evident, because they contain nothing which is not very easy to know when considered by itself, and because everywhere the things which follow have an exact connection with those that go before, and depend on them, yet, because they are rather long and demand the whole attention, they are not comprehended and

understood except by a very few. In the same way, although I consider that those which I use here equal, or even surpass, the demonstrations of geometry in certainty and evidence, I apprehend, nevertheless, that they cannot be adequately understood by many, because they are thus somewhat long, and depend on each other, as well as for the chief reason that they require a mind entirely free from all prejudice, which can easily cut itself off from communication with the senses. And to tell the truth, there are not so many minds in the world so adapted to speculations of metaphysics as to those of geometry. And moreover, there is still this difference, that in geometry, as each starts with the opinion that nothing is advanced there of which we have not a certain demonstration, those who are not perfectly versed therein sin much more frequently in approving false demonstrations, to make believe that they understand them, than in refuting the true. It is not so in philosophy, where, as each believes that everything it includes is problematical, few persons devote themselves to the research of truth; and, moreover, wishing to acquire a reputation for great intellect, they study nothing but how to arrogantly combat the most obvious truths

This is why, Sirs, whatever force my reasons may possess, because they belong to philosophy I do not hope

that they will have much effect on people's minds, unless you take them under your protection. But your company being held in so great esteem, and the name of Sorbonne having such authority that people have never so much deferred to the judgment of any other body, not only in matters of faith (next to the sacred Councils) but in matters of human philosophy also, and as every one believes it impossible to find elsewhere more solidity and knowledge, or more prudence and integrity in the giving of judgment, I do not doubt, if you deign to pay so much attention to this writing as to wish in the first place to correct it (for knowing not only my infirmity but also my ignorance, I should not dare be sure that there were no errors in it), then to add the things which it lacks, to complete those which are imperfect, and to give yourselves the trouble of offering a more ample explanation to those who want one, or at any rate to advise me thereof that I may work at it, and finally (after that the reasons by which I prove that there is a God, and that the human soul differs from the body, shall have been carried up to the point of clearness and evidence, whither I am sure they can be conducted, where they must be accounted very exact demonstrations), if you deign to authorise them by your approbation and render public testimony to their truth and certainty, I do not doubt, I say, that

after this, all errors and false opinions will be soon effaced from the minds of men. For the truth will make all the learned and men of understanding to subscribe to your judgment and authority; the atheists, who are generally more arrogant than learned and judicious, to throw off their spirit of contradiction, or may be they themselves will uphold the reasons which they will see accepted as demonstrations by all persons of intelligence, for fear of appearing not to understand them; and finally, it will make all others yield easily to so much testimony, and there will no longer be any one who dares to doubt the existence of God, and the real and true distinction between the human soul and the body.

It is for you, now, to judge of the fruit which shall spring from this belief, were it once well established, who see the disorders which the doubt of it produces; but it would ill become me to recommend further the cause of God and of religion to those who have always been its firmest upholders.

THE AUTHOR TO THE READER.

I HAVE already touched upon these two questions of God and of the human soul, in the French discourse which I published in the year 1637, upon the method of rightly conducting the reason and seeking truth in the sciences—not with the intention of treating them exhaustively, but merely in passing, in order to learn by the judgment that should be passed upon them, in what way I ought to treat them subsequently For they have always seemed to me to be of such importance, that I thought it proper to speak of them more than once. And the path which I take to explain them is so little trodden, and so far from the common road, that I did not believe it would be useful to indicate it in French, and in a treatise which could be read by every one, for fear that feeble minds would believe that it was permissible for them also to attempt it.

Now having begged, in this *Discourse on Method*, all those who should find in my writings anything worthy of censure, to do me the favour of inform-

ing me thereof, I have been offered no noticeable objections except two things concerning what I said on these two heads, to which I wish to reply here in a few words before undertaking their more exact explanation. The first is, that it does not follow, because the human mind, in reflecting on itself, knows itself to be nothing else but a thing which thinks, that its nature, or *essence*, is only to think, in such a way that this word "only" excludes all other things which perhaps could also be said to belong to the nature of the soul. To which objection I reply that it was not my intention in that place to exclude them according to the order of the truth of the thing (with which I was not then dealing), but only according to the order of my thought; so that what I meant was, that I perceived nothing which I knew to belong to my essence, except that I was a thing which thinks, or a thing which has in itself the faculty of thinking. Now I shall show presently how, from the fact that I know no other thing which belongs to my essence, it also follows that there is nothing which really belongs to it.

The second is, that it does not follow, because I have in me the idea of a thing more perfect than I, that this idea is more perfect than I, and much less that that which this idea represents, exists.

But I reply that in this word *idea* there is something equivocal; for it can be taken either materially, for an operation of my understanding, and in this sense it cannot be said to be more perfect than I; or objectively, for the thing which is represented by this operation, the which, although it is not supposed to exist outside my understanding, can nevertheless be more perfect than I, according to its essence. Now in the course of this treatise I shall show more fully how, merely because I have in me the idea of a thing more perfect than I, it follows that this thing truly exists. Moreover, I have also seen two other writings, fully dealing with this matter, but which did not combat my reasons so much as my conclusions, and this by arguments drawn from the commonplaces of the atheists. But because these kinds of arguments cannot make any impression on the minds of those who shall well understand my reasons, and because many persons' judgments are so feeble, and so little reasonable, that they allow themselves to be persuaded more often by their first opinions of a thing, however false and remote from reason, than by one solid and true, though subsequently understood refutation of their theories, I do not wish to reply to them here, for fear of being obliged to quote them first. I will merely

state generally, that all that atheists say to impugn the existence of God always depends either on their imagining human affections to be in God, or in their attributing to our minds so much force and wisdom that we indeed have the presumption to wish to determine and comprehend what God can and ought to do: so that all that they tell us will offer us no difficulty, provided only that we remember that we ought to consider our minds as finite and limited things, and God as a Being infinite and incomprehensible.

Now after having sufficiently recognised the sentiments of men, I undertake over again the treatise of God, and of the human soul, and at the same time to lay the foundations of the first philosophy; but without expecting for it any praise from the vulgar, or hoping that my book will be seen by many. On the contrary, I should never counsel any to read it, except those who wish, with me, to meditate seriously, and who shall be able to cut off their minds from communication with their senses, and deliver them entirely from all kinds of prejudices,—whom I know too well to be in very small number. But for those who, without troubling much about the order and connection of my reasons, shall amuse themselves by carping at each part, as many do,—those, I say,

will not draw much profit from the perusal of this treatise: and although, may be, they find in many places occasion to cavil, they will scarcely be able to make any pressing objections, or any which will be worthy of reply. And inasmuch as I do not promise the others to satisfy them at once, or presume so far as to believe I can foresee all that may be able to cause difficulty to any, I shall first set forth in these meditations the same thoughts by which I persuade myself of having arrived at a certain and evident knowledge of the truth, in order to see if by the same reasons which have persuaded me, I may also be able to persuade others; and after that I shall reply to the objections which have been made to me by persons of mind and doctrine, to whom I sent my meditations to be examined before committing them to the press; for they have made me so many and such different ones, that I truly venture to promise myself that it will be difficult for another to propose any of consequence which have not been touched upon. For this reason I pray those who shall desire to read these meditations, to form no judgment of them until they have first taken the trouble to read all the objections, and the replies I have made to them.

SUMMARY OF THE SIX FOLLOWING MEDITATIONS.

In the first, I put forward the reasons for which we can doubt generally of everything, and particularly of material things, at least as long as we possess no other foundations for the sciences than those we have had hitherto. For although the utility of a doubt so general may not appear at first sight, at the same time it is very great, in that it delivers us from every kind of prejudice, and prepares us a very easy way of accustoming the mind to detach itself from the senses, and, finally, makes it impossible that we can have any further doubt of the things which we shall subsequently discover to be true.

In the second, the mind, which, using its own liberty, assumes that all things of the existence of which it has the least doubt are not, recognises that, nevertheless, it is absolutely impossible that it does not exist itself. This also is of very great use, inasmuch as by this means it easily distinguishes between things which belong to itself,

that is, to the intellectual nature, and those which belong to the body. But because it may happen that some will expect of me in this place reasons for proving the immortality of the soul, I consider it my duty to inform them here that, having endeavoured throughout this treatise to write nothing of which I had not very exact demonstrations, I perceived that I was obliged to follow an order similar to that used by geometers, which is, to first put forward all the things from which depend the proposition which is sought, before concluding anything from it.

Now, the first and principal thing required in order to have a true knowledge of the immortality of the soul, is to form a clear and exact conception of the soul, entirely distinct from all the conceptions we can have of the body, which has been done in this place. Besides that, it is requisite to know that all the things which we conceive clearly and distinctly are true, in the manner that we conceive them, and this could not be proved before the fourth Meditation. Moreover, it is necessary to have a distinct conception of the corporeal nature, which forms part of the second, and part of the fifth and sixth Meditations. And finally, we should conclude from all this that the things we conceive clearly and distinctly to be of divers

substances, in the way that we conceive the mind and the body, are indeed substances really distinct from one another. And it is this which is concluded in the sixth Meditation. This is again confirmed in the same Meditation, from the fact that we conceive no body but as divisible, while the mind, or the soul of man, can be conceived only as indivisible; for truly we cannot conceive the moiety of a soul, as we can of the smallest of all bodies, so that we recognise that their natures are not only diverse, but even in a manner contrary. Now, I have not treated this matter more deeply in this writing, because that is sufficient to show clearly that the death of the soul does not follow on the corruption of the body, and thus to give to men the hope of a second life after death, as well as because the premises from which the immortality of the soul may be deduced depend on the explanation of all physics; in the first place, in order for us to know that all substances generally, that is to say, all things which cannot exist without being created by God, are in their nature incorruptible, and that they can never cease to be, if God Himself, in denying them His co-operation, does not reduce them to nothing; and then to observe that the body taken in general is a substance, and for this reason does not perish, but

that the human body, inasmuch as it differs from other bodies, is composed merely of a certain configuration of members, and similar accidentals, while the human soul is not thus composed of any accidentals, but is a pure substance. For although all its accidentals change,—for example, although it conceives certain things, wishes some, feels others, and so on, the soul nevertheless does not become anything else, while the human body becomes another thing, from the mere fact that the form of some of its parts are changed; whence it follows that the human body can easily perish, but that the spirit, or the soul of man (between which I make no distinction), is in its nature immortal.

In the third Meditation, it seems to me that I have explained at sufficient length the principal argument which I use to prove the existence of God. But yet, because I did not wish to employ in this place any comparisons derived from corporeal things, in order to withdraw as much as I can the minds of my readers from the habit and commerce of the senses, perhaps there remain many obscurities (which, as I hope, are entirely elucidated in the responses that I have made to the objections which have been since put before me)—as this, among others,—How the idea of a

Being supremely perfect, which is in us, contains so much objective[1] reality, that is to say, participates by representation in so many degrees of being and of perfection, that it must come from a supremely perfect cause. This I have made clear in these responses by the analogy of a very ingenious and artificial machine, the idea of which occurs to the mind of some workman; for as the objective artifice of this idea must have some cause, that is to say, either the workman's knowledge, or that of some other from whom he has received the idea, so, in the same way, it is impossible that the idea of God, which is in us, has not God Himself for its cause.

The fourth proves that all things that we conceive very clearly and distinctly are true, and at the same time explains in what the nature of error or falsehood consists, which it is necessary to know, as well for the confirmation of the preceding truths as for the better understanding of those that follow. But, however, it is to be observed, that I do not here treat at all of sin, that is, of the error which is committed in the pursuit of good and evil, but only of that which happens in the judgment, and the discernment of the true and the

[1] The term *objective*, as here and subsequently used by Descartes, is nearly equivalent to the modern *subjective*.

false; and that I do not intend to speak of the things which belong to faith, or to the conduct of life, but only of those which concern the speculative truths, and which can be known by the sole aid of natural light.

The fifth, besides explaining the corporeal nature in general, again demonstrates the existence of God by a new reason, in which, nevertheless, some difficulties may be encountered; but their solution will be seen in the responses to the objections which have been made to me. And moreover, I show in what way it is true that the certainty even of geometrical demonstrations depends on the knowledge of God.

Finally, in the sixth, I distinguish the action of the understanding from that of the imagination, and the marks of this distinction are there described. I show that the soul of man is really distinct from the body, and yet so strictly conjoined and united therewith, that they compose but one thing; all the errors which proceed from the senses are there explained, with the means of avoiding them; and finally, I bring forward all the reasons from which we can conclude the existence of material things,—not that I judge them very useful to prove what they do prove, to wit, that there is a world, that men have bodies, and similar things which have never

been doubted by any man of good sense, but because that in considering them more closely we come to recognise that they are neither so firm nor so evident as those which conduct us to the knowledge of God and of our soul; so that these are the most certain, and the most evident, which can fall under the cognisance of the human mind. And as this is all that I have purposed to prove in these six Meditations, I omit here many other questions of which, also, I have spoken in passing, in this treatise.

MEDITATIONS CONCERNING THE FIRST PHILOSOPHY.

IN WHICH ARE DEMONSTRATED THE EXISTENCE OF GOD, AND THE REAL DISTINCTION BETWEEN THE SOUL AND THE BODY OF MAN.

FIRST MEDITATION.

OF THINGS THAT CAN BE CALLED INTO QUESTION.

It was some time ago that I first perceived that from my earliest years I have received as true a number of opinions which are false, and that what I have since based upon opinions so ill-assured can be but very doubtful and uncertain. And thenceforth I judged that I must seriously undertake, for once in my life, to rid me of all the opinions that I had formerly received into my belief, and begin all over again from the foundations, if I wished to establish something firm and

constant in the sciences. But this undertaking appearing to me very great, I waited until I had attained so ripe an age that I could hope to reach no other afterwards in which I should be more fitted to execute it, which has made me delay so long, that henceforward I should believe that I did wrong if I continued to employ in deliberation such time as remains to me to act.

To-day, therefore, when in accordance with this design I have delivered my mind of every sort of care, so that, happily, I do not feel agitated by any passions, and have procured a sure repose in peaceful solitude, I shall apply myself seriously and freely to the general overthrow of my old opinions. And for this end it will not be necessary to show that they are all false, in which perhaps I should never succeed; but inasmuch as reason already persuades me that I should restrain myself from giving credence to things which are not certain and indubitable, no less carefully than to those which manifestly appear to me false, it will be sufficient for me to reject them all, if I can find in any some reason to doubt. And for that purpose there will be no need for me to examine each in particular, which would be an infinite labour, but because the destruction of the foundations necessarily carries with it all the rest of the edifice, I

shall attack first the principles on which all my former opinions were built.

All that I have accepted up to the present as most true and assured, I have apprehended from the senses, or by the senses. Now I have sometimes proved these senses to be deceivers, and it is prudent never to rely entirely on things which have once deceived us.

But, perhaps, although the senses deceive us sometimes, as to things hardly perceptible, and very remote, many other things may yet be met with, which we cannot reasonably doubt, although we know them by means of the senses,—for example, that I am here, seated by the fire, clothed in a dressing-gown, having this paper in my hands, and other things of that nature. And how is it that I cannot deny that these hands and this body are mine, unless, perhaps, I compare myself to certain madmen, whose brain is so disturbed and obscured by black bilious vapours, that they are always certain that they are kings, when they are very poor, that they are clothed in gold and purple, when they are quite naked, or who imagine that they are pitchers, or that they have a glass body? How now! These are mad, and I should be no less extravagant than they if I governed myself by their examples.

Yet I have to consider here that I am a man, and in consequence that I am accustomed to sleep, and to represent to myself in my dreams the same things as do these madmen when they are awake, or sometimes things less probable. How many times have I dreamed at night that I was in this place, that I was dressed, and by the fire, although I was undressed and in bed? It indeed appears to me at present that it is not with sleeping eyes that I behold this paper, that this head which I shake is not dull, that it is deliberately and with purpose that I extend this hand, and that I feel it; that which happens in sleep does not seem so clear or so distinct as all this. But in thinking it over carefully I remember having often been deceived while sleeping by similar illusions, and in dwelling on this thought, I see so plainly that there are no certain indications by which we can exactly distinguish waking from sleeping, that I am quite surprised, and my astonishment is such that it is almost able to persuade me that I sleep.

Let us suppose now, therefore, that we are asleep, and that all these particulars,—to wit, that we open our eyes, shake our head, extend our hands, and things of the kind, are only false illusions, and let us think that perhaps our hands, or our whole body, are not such as we see them. Yet at any

rate we must acknowledge that the things which are represented to us in sleep are like pictures and paintings, which can be formed only after the likeness of something real and true; and that thus at least these general things, namely eyes, a head, hands, and a whole body, are not imaginary, but real and constant. For it is true that painters, even when they study with the most artifice to represent sirens and satyrs by bizarre and extraordinary figures, cannot give them entirely new forms and natures, but only a certain medley and mixture of the members of different animals; or if, perhaps, their imagination is extravagant enough to invent something so new that the like was never seen, so that their work represents a thing purely imaginary and absolutely false, at any rate the colours of which they compose it must certainly be true.

And by the same reason, although these general things,—to wit, a body, eyes, head, hands, and things of the kind, might be imaginary, yet we have to own that there are at least some other things yet more simple and universal, which are true and existent, of the mixture of which, neither more nor less than of that of some actual colours, are formed all those images of things which reside in our thought, whether true and

real, or feigned and fantastic. Of this kind of thing is the corporeal nature in general and its extension, together with the form of extended things, their quantity or size, and their number, and also the place where they are, the time which measures their duration, and similar things.

That perhaps is why we shall not draw a wrong conclusion from this, if we say that physics, astronomy, medicine, and all other sciences which depend on the consideration of composite bodies, are very doubtful and uncertain, but that arithmetic, geometry, and other sciences of that kind, which treat only of very simple and general things, without regarding whether they are in nature, or whether they are not, contain something certain and indubitable; for whether I wake or sleep, two and three added together will always make the number of five, and the square will never have more than four sides, nor does it seem possible that truths so clear and so obvious can be suspected of any falsehood or uncertainty.

Yet for a long while I have had in my mind one certain opinion,—that there is a God who can do all things and by whom I have been made and created such as I am. Now how do I know whether He has not so wrought that there be no earth, no heavens, no extended body, no shape,

no size, no place? And how, nevertheless, have I the consciousness of all these things, and how do they all seem to me to exist no otherwise than as I see them? And in the same way, as I judge sometimes that others deceive themselves in the things that they think that they know best, how do I know whether He has not made me so that I, also, deceive myself every time I add two and three, or number the sides of a square, or judge of something yet more easy, if anything easier than that can be imagined? But perhaps God has not wished me to be deceived in this way, for He is called supremely good. Yet if it is contrary to His goodness to have made me so that I might always deceive myself, it also would appear to be contrary to it to permit me to deceive myself sometimes, and nevertheless I cannot doubt that He does permit it.

Perhaps there will be persons who would prefer to deny the existence of a God so powerful, rather than believe that all the other things are uncertain, but for the present let us not resist them, and let us suppose in their favour that all which is here said of a God is a fable; nevertheless, in whatever way they imagine that I have arrived at the estate and to the being that I have attained to, whether they attribute it to some destiny or fatality,

whether they refer it to chance, whether they would have it be by a continuous sequence and connection of things, or in some other manner, since to fail and to be deceived is an imperfection, the less puissant will be the author to whom they shall assign my origin, the more probable it is that I am so imperfect that I always deceive myself. To which arguments I have nothing certain to answer, but, after all, I am constrained to acknowledge that there is nothing in all I once believed to be true, which I cannot in some way doubt, and that not through lack of consideration, or through frivolity, but for very strong and matured reasons, so that henceforth I ought to prevent myself from giving credence to it [viz., to that which I once believed] no less carefully than to that which should be manifestly false, if I wish to find something certain and assured in the sciences.

But it is not enough to have made these remarks; it is necessary, moreover, that I take care to remember them: for still these old and conventional opinions often come into my thought, the long and familiar use they have had from me giving them the right to occupy my mind in spite of myself, and to render themselves almost mistresses of my credence; and I shall never break

myself of deferring to them, and putting confidence in them, so long as I shall consider them such as they are in reality, that is, in some way doubtful, as I have just shown, and yet very probable, so that one has much more reason to believe than to deny them. This is why I think I shall not do amiss, if, adopting with deliberate purpose a contrary sentiment, I deceive myself, and feign for a while that all these opinions are entirely false and imaginary, until, having finally balanced my old and my new prejudices so that they cannot make my mind incline to one side rather than to the other, my judgment henceforth may be no longer dominated by bad habits, and turned from the right way which can conduct it to the knowledge of truth. For I am sure that in the meantime there can be neither danger nor error in this path, and that I cannot at present concede too much to my distrust, since it is now not a question of acting, but only of meditating and taking cognisance.

I shall assume, therefore, that not God, who is very good, and the sovereign source of truth, but a certain evil genius, no less crafty and deceitful than potent, has employed all his power in deceiving me. I shall suppose that the sky, the air, the earth, colours, figures, sounds, and all

other exterior things are only illusions and dreams, which he uses as snares for my credulity. I shall consider myself as having no hands, eyes, flesh, blood, nor any senses, but as believing falsely that I possess all these things; to this notion I shall remain obstinately attached, and if it is not in my power to arrive by this means at the knowledge of any truth, at least I shall be able to suspend my judgment. This is why I shall take great care not to receive any falsehood into my belief, and so well shall I prepare my mind for the tricks of this great deceiver, that however powerful and crafty he be, he shall never be able to impose upon me.

But this plan is troublesome and laborious, and a certain indolence draws me imperceptibly into the way of my ordinary life. And just as a slave, who in his sleep enjoys an imaginary liberty, fears to wake as soon as he begins to suspect that his liberty is but a dream, and acquiesces in these agreeable illusions in order that he may be all the longer imposed upon by them, so of myself I fall back insensibly into my former opinions, and dread to awake from this drowsiness, for fear that the troublesome lucubrations which must succeed to the tranquillity of my repose, instead of bringing me light and insight in the knowledge of truth,

should be insufficient to illumine all the dark places of the difficulties which have just been raised.

SECOND MEDITATION.

OF THE NATURE OF THE HUMAN MIND, AND THAT IT IS EASIER TO KNOW THAN THE BODY.

Yesterday's Meditation has filled my mind with so many doubts that henceforth it is no longer in my power to forget them, and yet I do not see how I shall be able to solve them; and just as if I had suddenly fallen into very deep water, I am so taken aback that I can neither find foothold at the bottom, nor swim to keep myself at the top. I shall make an effort, nevertheless, and follow again the same road I went over yesterday, by putting away from me all in which I shall be able to imagine the least doubt, just as if I knew it to be absolutely false, and I shall continue to follow this path, until I have met with something that is certain; or at least, if I can do nothing else, until I have learned for certain that nothing in the world is certain. Archimedes, to draw the terrestrial globe from its place, and transport it elsewhere,

asked no more than one firm and immovable point: in the same way, I shall have the right to conceive high hopes, if I am happy enough to find but one certain and indubitable thing.

I assume, therefore, that everything that I see is false; I persuade myself that of all the things which my memory, stored with dreams, represents to me, none have ever existed; I suppose that I have no sense; I believe that body, shape, extension, motion, and place are only fictions of my mind. What, then, shall be esteemed true? Nothing, perhaps, but that nothing in the world is certain.

But how do I know that there is not some other thing, different from these that I have just pronounced uncertain, of which there cannot be the slightest doubt? Is there not a God, or some other power which puts these thoughts into my mind? Not necessarily; for it may be that I am capable of producing them myself. I, at least, then, am I not something? But I have already denied that I had any senses or any body; nevertheless I hesitate, for what follows? Am I so dependent on the body and on the senses that I cannot exist without them? But I persuaded myself that there was nothing in the whole world, no sky, no earth, no spirits, no bodies; did I

not therefore also persuade myself that I did not exist? Far from it; beyond doubt I existed if I persuaded myself, or even if I only thought something. But there is an unknown deceiver, very powerful and very cunning, who employs all his energy in continually deceiving me; therefore there is no doubt that I exist, if he deceives me; let him deceive me as much as he will, he will never be able to make me to be nothing, so long as I shall think I am something. So having pondered that well, and examined everything carefully, it must after all be concluded and held as unquestionable that this proposition—*I am, I exist*—is necessarily true, every time that I pronounce it, or conceive it in my mind.

But I do not yet know quite clearly what I am, I, who am certain that I am: so that henceforth I must take careful heed not to imprudently mistake some other thing for myself, so as not to err in this knowledge, which I maintain to be more certain and evident than all which I have had formerly.

This is why I shall now consider entirely anew what I believed myself to be before I entered upon these last thoughts, and from my old opinions I shall lop off all which can be in the slightest degree opposed to the reasons I have

already alleged, so that there may remain just that which is perfectly certain and indubitable, and that alone. What, then, have I believed myself to be hitherto? Without doubt, I thought I was a man; but what is a man? Shall I say that it is a rational animal? No indeed, for I should afterwards have to find out what an animal is, and what rational is, and thus from one single question I should be launched, without knowing it, into an infinity of others more difficult and complex, and I would not misuse the little time and leisure remaining to me, by employing it in unravelling difficulties of the kind. But I will here dwell rather on the consideration of the thoughts which heretofore took rise of themselves in my mind, and with which my nature alone inspired me, when I applied myself to the contemplation of my being. I considered myself first as having a face, hands, arms, and all the mechanism of flesh and bones, such as it appears in a corpse, which I designated "body." Moreover, I reflected that I nourished myself, that I walked, felt, and thought, and I connected all these actions with the soul; but I did not stop to think what this soul was; or rather, if I did so, I imagined it something extremely rare and subtle, as a wind, a flame, or a very volatile air insinuated and diffused through-

out my more material parts. As to what the body was, in nowise did I doubt of its nature, but I thought I knew it very distinctly; and if I had wished to explain it according to the notions I then had of it, I would have described it in this way. By the body I understand all which can be limited by some figure, which can be contained in some place, and occupy a space in such a manner that all other bodies are excluded therefrom; which is sensible either to touch, or sight, or hearing, or taste, or smell; which can be moved in many ways, not indeed by itself, but by something extraneous which comes into contact with it, and from which it receives the impression; for I do not believe at all that the power of moving of oneself, or of feeling, or of thinking, belongs to the nature of the body; on the contrary, I was astonished, rather, to see that in some bodies faculties of the kind were to be met with.

But I, what am I, now that I assume that there is a certain genius who is extremely powerful, and, if I dare say so, malicious and crafty, who uses all his power and industry to deceive me? Can I be sure that I have the least of all those things that I have just said belonged to the nature of the body? I pause to consider that attentively; I revolve all these things in my mind, and I find

none of them which I can say are in me. There is no need for me to stay to enumerate them. Let us pass, therefore, to the attributes of the soul, and see if there are any which may be in me. The first attributes are [the faculties of] feeding myself and of walking; but if it is true that I have no body, it is also true that I can neither walk nor feed. Another is sensibility, but neither can we feel without the body; besides, I have at times thought I felt many things during sleep, which on waking I have discovered that I had not really felt. Another is thought, and here I find that thought is an attribute which belongs to me; it alone cannot be separated from me. *I am, I exist*,—that is certain, but for how long? As long as I think; for, perhaps, if I entirely ceased to think, I should at the same time entirely cease to be. I now admit nothing which is not of necessity true; therefore, strictly speaking, I am *only a thing which thinks*, that is to say, a mind, an understanding, or a reason, terms whose signification was formerly unknown to me. Now I am a real thing, and truly existent, but what thing? I have said it,—a thing which thinks. What more? I will exert my imagination, to see if I am not something more yet. I am not this collection of members which is called the human

body; I am not a volatile and penetrating air diffused through these members; I am not a wind, a breath, a vapour, or any of the things which I can feign and imagine myself, since I have assumed all that to be nothing, and since without changing this assumption I find that I do not cease to be certain that I am something.

But perhaps it is true that these very things which I suppose not to exist, because they are unknown to me, are not in reality different from myself, whom I know? I cannot say; I do not now dispute it; I cannot give my opinion except on things which are known to me: I know that I exist, and I am seeking what I am—I, whom I know to be. Now it is very certain that the knowledge of my being, thus taken exactly, does not depend on the things whose existence is not yet known to me; consequently, it does not depend on any of those that I can feign by my imagination. And even these terms "feign" and "imagination" warn me of my error. For I should feign indeed if I imagined myself to be something, since to imagine is nothing else than to contemplate the figure or image of a material thing: now I already know for certain that I am, and that at the same time it may be that all these

images, and generally all the things which are connected with the bodily nature, are only dreams or chimeras. Following which, I see clearly, that I have as little reason in saying, I will excite my imagination in order to know more exactly what I am, as if I said, I am now awake, and perceive something real and veritable, but because I do not yet perceive it plainly enough, I will send myself to sleep expressly in order that my dreams may represent it to me with even more truth and evidence. And therefore I know clearly that nothing which I can comprehend by means of the imagination belongs to this knowledge that I have concerning myself, and that there is need to call off and deflect the mind from this mode of conception, in order that it may more exactly know its nature.

But what, then, am I? *A thing which thinks.* What is a thing which thinks? It is a thing which doubts. understands, conceives, affirms, denies, wills, wills not, which also imagines, and feels Certainly it is no small matter, if all these things belong to my nature. But why should they not belong to it? Am I not that which now doubts of almost everything, which nevertheless understands and conceives certain things, which asserts and affirms these alone to be true, and

denies the rest, which wishes and desires to know more of them, which will not be deceived, which imagines many things, sometimes even despite the fact that I may have them, and which also feels many things, as by means of the bodily organs? Is there nothing of all this which is as true as it is certain that I am and that I exist, even if I were always to sleep, and he who has given me being were to exert all his ingenuity to impose upon me? Is there, besides, any of these attributes which can be distinguished from my thought, or which can be said to be separated from myself? For it is so self-evident that it is I who doubt, understand, and desire, that there is no need to add here anything to explain it. And I certainly have also the power of imagining, for although it might happen (as I have supposed before) that the things which I imagine are not true, nevertheless this power of imagination does not cease to be really in me, and makes part of my thought. In short, I am the same thing which feels, that is to say, which perceives certain things, as by the medium of the senses, since I indeed see light, hear sound, feel heat. But I shall be told that these appearances are false, and that I sleep. Be it so; yet at least it is very certain that it seems to me that I see light, hear sound, and feel heat;

that cannot be false; and this is properly that in me which is called feeling, and feeling is precisely nothing else than thought. From which I begin to know what I am with a little more clearness and distinctness than before.

But nevertheless, it still seems to me, and I cannot prevent myself from believing, that the corporeal things, whose images are formed by thought, which fall under the senses, and which the senses themselves examine, are much more distinctly known than this I know not what part of myself which does not fall under the imagination; although in reality it is very strange to say that I may know and understand more distinctly things whose existence appears to me doubtful, which are unknown to me, and which do not belong to me, than those of the truth of which I am persuaded, which are known to me, and which belong to my own nature, and in a word, myself. But I see plainly what it is,—my mind is a vagabond which likes to wander, and which cannot yet suffer to be confined within the exact limits of truth. Let us once again, then, slip its bridle, and giving it every sort of liberty, permit it to consider the objects which appear to it outwardly, so that afterwards, when we come gently and pertinently to restrain it, and to make it pause at the con-

sideration of its being and of the things it finds in itself, it may let itself be more easily ruled and led.

Let us now consider, therefore, the things vulgarly esteemed to be the easiest of all to know, and which are also believed to be those which are known most distinctly—*i.e.*, the bodies which we touch and see,—not, indeed, bodies in general, for these general notions are ordinarily a little more confused,—but let us consider one of them in particular. Let us take, for example, this piece of wax: it has just been freshly brought from the hive; it has not yet lost the softness of the honey it once contained; it still keeps something of the fragrance of the flowers from which it has been collected; its colour, shape, size, are obvious; it is hard, cold, plastic, and if you strike it, it will make some sound. In brief, all the things which can distinctly indicate a body are to be found in this.

But see,—while I speak we put it near the fire; what savour remains to it is exhaled, the fragrance escapes, its colour changes, its shape is lost, its bulk increases, it becomes liquid, it grows warm, we can scarcely manipulate it, and when we strike it, it no longer gives any sound. Does the same wax remain after this change? We must admit that it does remain, no one doubts it or judges

otherwise. What, then, did we recognise in this piece of wax with such distinctness? Certainly it can be nothing of what I have observed in it by the medium of the senses, since all the things which come under taste, smell, sight, touch, and hearing are changed, and yet the same wax remains. Perhaps it was what I now think; to wit, that this wax was neither the sweetness of honey, nor the agreeable fragrance of flowers, nor the whiteness, nor the shape, nor the sound, but only a body which a little while ago appeared to me sensible under these forms, and which now makes itself sensible under others. But what, strictly speaking, do I imagine, when I conceive it in this way? Let us consider it attentively, and discarding all the things which do not belong to the wax, see what remains. In truth, there remains nothing but something extended, flexible, and mutable. Now what is "flexible" and "mutable"? Does it not mean that I may imagine that this wax, being round, is capable of becoming square, and of passing from a square to a triangular shape? No, certainly it is not that, since I conceive it capable of receiving an infinity of similar changes, and yet I cannot cover this infinity by my imagination, and consequently this conception of the wax is not the work of the faculty of my imagination.

What, now, is this extension? Is it not also unknown? For it becomes greater when the wax melts, greater again when it boils, and greater still as the heat increases; and I should not conceive clearly and truthfully what the wax is, if I did not consider that this piece which we are contemplating is capable of receiving, as regards extension, more variety than I have ever imagined of it. It must therefore be agreed that I cannot even comprehend by the imagination what this piece of wax is, and that it is only my understanding which can comprehend it. I say this morsel of wax in particular, for as regards wax in general it is yet more evident. But what is this morsel of wax which cannot be comprehended except by the understanding or by the mind? Certainly it is the same that I see, and touch, and imagine; in short, it is the same that I believed it to be to begin with. Now what is to be especially noticed here, is that its perception is not a seeing, nor a touching, nor an imagining, and never has been so, although it appeared so before, but only an inspection of the mind, which may be imperfect and confused, as it was before, or very clear and distinct, as it is now, according as my attention is directed more or less to the things which are in it and of which it is composed.

Yet I cannot wonder enough when I consider how weak my mind is, and how insensibly inclined towards error. For although I consider all that within myself without speaking, nevertheless words impede me, and I am almost deceived by the terms of ordinary language, for we say that we see the same wax, if it is present, and not that we judge it to be the same because it has the same colour and shape; whence I would almost conclude that the wax is known by the sight of the eyes, and not by the perception of the mind alone. But when I look from the window and see men passing in the street, I do not fail to say at the sight of them that I see some men, just as I say that I see some wax, and yet what do I see from the window, except hats and cloaks which might cover artificial machines which moved only by springs? But I judge that these are men; and thus I comprehend by the mere power of judging which resides in my mind, what I believe I see with my eyes.

A man who endeavours to raise his knowledge above the common should be ashamed to derive occasions for doubt from forms of speech invented by the vulgar; I prefer to pass further, and to consider whether I conceived with more evidence and perfection what the wax was, when I first

perceived it, and when I believed I knew it by means of the exterior senses, or at least by common sense, as they call it,—that is to say, by the imaginative faculty,—than I do now, after having more carefully examined what it is, and in what way it can be known. Certainly it would be ridiculous to call that into question. For what was there in the first perception which was distinct? What was there which did not seem able in the same way to fall under the sense of the smallest of animals? But when I distinguish between the wax and its exterior forms, and consider it quite naked, just as if I had taken off its clothes, it is certain that although some error may occur in my judgment, I nevertheless cannot perceive it in this way without a human mind.

But, finally, what am I to say of this mind, that is, of myself,—for up till now I admit myself to be mind only? What then? I who apparently conceive this piece of wax with such exactitude and clearness, do I not know myself, not only with more truth and certainty, but also with more exactitude and clearness? For if I judge that the wax is or exists because I see it, it certainly follows yet more evidently that because I see it, I am or exist myself; for it is possible that this that I see is not indeed the wax, it is also possible even that I have

not eyes to see anything, but it is not possible that when I see or (which is same to me) when I think I see, I who think am not something. So that if I judge that the wax exists, because I touch it, the same result will follow again, to wit, that I am, and if I judge it because my imagination or whatever other cause it may be persuades me, I shall always conclude the same thing. And what I have remarked here of the wax can apply to all the other things which are exterior to me, and which occur outside myself. And moreover, if the notion or perception of the wax has appeared more exact and distinct after not only sight or touch, but many other causes have rendered it more manifest to me, with how much more evidence, distinctness, and exactitude must it be confessed that I at present know myself? For all the reasons which are employed in the knowledge and conception of the nature of wax, or of some other body, prove much better the nature of my mind, and there are yet so many others in the mind itself which can help to throw light on its nature, that such as depend on the body, as these do, are hardly worth taking into account.

But after all, here I am, unconsciously returned to where I wanted to be; for since it is at present plain to me that even bodies are not

properly known by the senses, or by the imaginative faculty, but by the understanding alone, and that they are not known from being seen or touched, but only from being understood, or clearly comprehended by the thought, I see plainly that there is nothing more easy for me to know than my mind. But because it is difficult to rid myself thus precipitately of an opinion to which I have been for so long accustomed, it will be well if I pause here a while, in order that by the length of my meditation I may impress this new knowledge more deeply in my memory.

THIRD MEDITATION.

OF GOD; THAT HE EXISTS.

I shall now shut my eyes, stop my ears, avert all my senses, even efface from my thought all images of corporeal things, or at least, since that can hardly be done, I shall account them as vain and false; and thus, communing only with myself, and considering my innermost parts, I shall try to become, little by little, better acquainted and more familiar with myself. I am a thing which thinks, that is to say, which doubts, affirms, denies, which

knows a few things, and is ignorant of many more, which loves, hates, wills, wills not, which also imagines, and feels. For, as I have remarked before, although the things which I feel and imagine may perhaps be nothing at all outside me and in themselves, I am nevertheless assured that these modes of thought which I call sensations and imaginations, in that they are only modes of thought, certainly reside within me and are all to be met with there. And in the little that I have just said, I believe I have set down all that I truly know, or at least all that up to the present I have observed that I knew.

Now, to try to extend my knowledge further, I shall use circumspection, and carefully consider whether I shall not be able again to discover within me other things which I have not as yet perceived. I am certain that I am a thing which thinks; but do I not, therefore, know also what is requisite to make me certain of anything? Certainly in this first knowledge there is nothing which assures me of the truth except the clear and distinct perception of what I say, which indeed would not be sufficient to assure me that what I say is true, if it could ever happen that a thing which I conceived thus clearly and distinctly were false; and so it seems to me that already I can establish,

as a general rule, that all the things which we conceive very clearly and very distinctly, are true.

Notwithstanding, I have received and admitted many things heretofore as very certain and very plain, which, nevertheless, I have afterwards recognised to be doubtful and uncertain. What, then, were these things? They were the earth, the heavens, the stars, and everything else that I perceived by the medium of my senses. Now what is it that I conceived clearly and distinctly in them? Certainly, nothing except that the ideas or thoughts of all these things presented themselves to my mind. And still at present I do not deny that these ideas occur within me. But there was yet another thing which I made sure of, and which, because I was accustomed to believe it, I thought I perceived very clearly, although in truth I did not perceive it,—to wit, that there were things outside me whence these ideas proceeded, and which they resembled perfectly,—and it was there that I deluded myself; or if perhaps I judged in accordance with the truth, it was no cognizance that I possessed which caused the truth of my judgment.

But when I considered something very simple and very easy concerning arithmetic and geometry,—for example, that two and three

added together make five, and similar things,—did I not conceive them at least sufficiently clearly to be sure that they were true? Certainly, if I have since judged that these things might be doubted, it has been for no other reason than because it came into my mind that perhaps some God had been able to give me such a nature that I might deceive myself even touching the things which seemed to me the most manifest. For every time that my preconceived opinion of the sovereign power of a God presents itself to my thought, I am constrained to acknowledge that it is easy for Him, if He will, to work so that I deceive myself, even in the things that I believe I know with very great clearness; and on the other hand, every time I turn to the things which I think I conceive very clearly, I am in such a manner persuaded by them that I let myself declaim these words:—Deceive me who may, this, nevertheless, he can never do,—cause me to be nothing so long as I shall think I am something, or make it true some day that I have never been, since it is true now that I am, or that two and three together might make either more or less than five, or similar things which I see clearly cannot be otherwise than as I conceive them.

And certainly, since I have no reason to believe

that there is some God who is a deceiver, and since, even, I have not yet considered those which prove that there is a God, the reason for doubt which depends only on this opinion is very subtle, and, so to speak, metaphysical. But in order to be able to remove it entirely, I must inquire whether there is a God, as soon as occasion shall present itself, and if I find that a God exists, I must also inquire whether He can be a deceiver, for without the knowledge of these two truths I do not see that I can ever be certain of anything.

And so that I may have opportunity to examine this without interrupting the order of meditation which I have proposed to myself,—which is to pass by degrees from the notions which I shall find primarily in my mind, to those that I shall be able to find there afterwards,—I must here divide all my thoughts into certain kinds, and consider to which of these kinds truth or error properly belongs.

Among my thoughts, some are like the images of things, and it is to these alone that the name of idea is properly applied, as when I represent to myself a man, or a chimera, or the heavens, or an angel, or God Himself. Others, again, have also some other forms; for when I will, when I fear, when I affirm or deny, I indeed conceive some thing as the subject of the action of my mind, but

by this action I also add something else to the idea which I have of that thing; and of this kind of thoughts some are called wills, or affections, and others judgments.

Now, concerning ideas,—if we consider them only in themselves, and do not connect them with any other thing, they cannot, properly speaking, be false, for whether I imagine a goat or a chimera, it is none the less true that I imagine the one than that I imagine the other.

Nor must we fear, either, that we might encounter falsity in the affections or will, for although I might desire bad things, or even things which never were, for all that it is none the less true that I desire them.

Thus there remain only my judgments, and in these I ought to take particular care not to deceive myself. For the principal and the commonest error which can occur in my judgments consists in my judging that the ideas which are in me are like or conformable to things which are outside me · for certainly, if I considered the ideas only as certain modes or forms of my thought, without desiring to connect them with any exterior thing, they would hardly have the power to give me any occasion to err.

Now, among these ideas, some appear to me to

be born with me, others to be foreign and to come from without, and others to be made and invented by myself. For as I have the faculty of conceiving that which is generally called a thing, or a truth, or a thought, it seems to me that I do not derive it from anywhere but my own nature; but if I now hear any sound, if I see the sun, if I feel heat, up to the present I have judged that these sensations proceed from certain things which exist outside me; and finally, it seems to me that sirens, hypogriffs, and similar chimeras are fictions and inventions of my mind. But it also may be that I can persuade myself that all these ideas are of the kind that I call foreign, and which come from without, or that they are all born with me, or that they have all been made by me, for I have not yet clearly discovered their true origin. And what I here have chiefly to do, is to consider, with regard to those which seem to me to come from certain objects outside me, what are the reasons which oblige me to believe that they are like to those objects.

The first of these reasons is that it seems to me that that is taught me by nature; and the second is that I experience in myself that these ideas do not depend on my will, for they often present themselves to me in spite of myself, just as at this

moment, whether I will it or will it not, I feel heat; and for that reason I am persuaded that this sensation or this idea of heat is produced in me by a thing different from myself, namely, by the heat of the fire by which I am sitting. And I see nothing which seems to me more reasonable than to judge that this foreign thing instils and imprints in me its resemblance rather than any other thing.

Now I must see if these reasons are sufficiently strong and convincing. When I say that it seems to me that that is taught by nature, I merely mean by this word nature a certain inclination which leads me to believe it, and not a natural light which makes me know it is true. Now there is a great difference between these two ways of speaking, for I cannot call into question anything which natural light shows me to be true, in the same way that it has already shown me that because I doubted, I could conclude that I existed; seeing that I have not in myself any other faculty or power of distinguishing the true from the false which can teach me that what this light shows me as true is not true, and on which I can so much depend. But as regards the inclinations which also seem to be natural to me, I have often remarked that when it has been a question of choosing between the virtues and the vices, they have led me

no less towards the evil than towards the good, which is why I need no longer follow them in matters concerning the true and the false.

And as for the other reason,—which is that these ideas must come from elsewhere, since they do not depend on my will,—I find it no more convincing. For in the same manner that the inclinations of which I spoke just now are in me, notwithstanding that they do not always agree with my will, so it may be that there is within me some faculty or power fitted to produce these ideas without the aid of any exterior things, although it may as yet be unknown to me: for hitherto, indeed, it has always seemed that when I sleep, they form themselves in me thus without the aid of the objects they represent. And finally, although I may agree that they are caused by these objects, it does not necessarily follow that they ought to resemble them. On the contrary, I have often remarked in many cases a great difference between the object and its idea. For example, I find within me two quite different ideas of the sun: the one takes its origin from the senses, and should be placed in the category of those which I have said above come from without, by which it seems to me extremely small; the other is taken from the reasonings of astronomy,

that is to say, from certain notions born with me, or, finally, is formed by myself in some way or other, by which it seems to me many times larger than all the earth. Certainly these two ideas which I conceive of the sun cannot both resemble the same sun, and reason leads me to believe that that which comes directly from its appearance is that which is most different from it. All this makes me well aware that up to the present it has not been by a certain and deliberate judgment, but only by a blind and hasty impulse that I have believed that there were things outside me, and different from my being, which by the organs of my senses, or by some other means, send into me their ideas or images and impress their appearances upon me.

But there is another way of ascertaining whether, among the things of which I have ideas within me, there are any which exist outside myself. That is to say, if these ideas are taken only as certain modes of thought, I do not recognise any difference or inequality among them, and all appear to me to proceed from me in the same way; but considering them as images, of which one represents one thing and another represents another thing, it is evident that they are very different from each other. For those, indeed, which represent substances to me

are without doubt something more, and contain in themselves (so to speak) more objective reality, that is to say, participate by appearance in more degrees of being or of perfection, than those which represent to me merely modes or accidents. Moreover, the idea by which I conceive of a sovereign God, eternal, infinite, immutable, all-knowing, all-powerful, and universal creator of all things which are outside Himself,—that idea, I say, certainly contains more objective reality than those by which finite substances are represented to me.

Now, natural light makes it manifest that there ought to be at least as much reality in the efficient and total cause as in its effect, for whence can the effect derive its reality, except from its cause? And how could this cause communicate reality to the effect, if it had not reality itself? And thence it follows, not only that a nonentity cannot produce an entity, but also that that which is more perfect, that is to say, which contains in itself more reality, cannot be a consequence and a dependence of the less perfect; and this truth is not only clear and evident as regards the effects having that reality which philosophers call actual or formal, but also as regards the ideas in which we consider merely the reality which they call

objective. For example, the stone which has never existed not only cannot now begin to be, unless it is produced by a thing which possesses in itself, formally or eminently,[1] all which enters into the composition of a stone, that is to say, which contains in itself the same things as those which are in the stone, or others which are more excellent; and heat cannot be produced in a subject which before was without heat, except by a thing which is of an order, or a degree, or a kind as perfect as the heat, and so with other things. But again, besides that, the idea of heat, or of the stone, cannot be in me, if it has not been put there by some cause which has at least as much reality as I conceive to be in the heat or the stone, for although the cause does not convey to my idea anything of its actual or formal reality, it should not on that account be imagined that this cause ought to be less real, but we should know that every idea being a work of the mind, its nature is such that it does not demand for itself any other formal reality than that which it receives and borrows from the thought or from the mind,

[1] A term invented by Descartes. If perfection is contained by a cause and its effect in an equal degree, that perfection is contained in the cause *formally;* but if the cause contains a higher perfection than appears in the effect, it contains it *eminently.*

of which it is only a mode, that is to say, a manner or way of thinking. Now, in order that an idea may contain such and such an objective reality rather than another, it ought without doubt to have that reality from some cause in which there occurs at least as much of formal reality as this idea itself contains of objective reality, for if we suppose that there is something in an idea not met with in its cause, it follows, therefore, that it derives it from nothing. But however imperfect the mode of existence by which a thing objectively or by representation exists in the understanding through its idea, it nevertheless certainly cannot be said that this mode and manner of being is nothing, or, consequently, that this idea derives its origin from nothing. Nor ought I to imagine that, the reality which I consider in my ideas being only objective it is unnecessary for the same reality to be formally or actually in the causes of these ideas, but that it is sufficient for it to be in them objectively; for in the same way that this manner of objective being belongs to the ideas in their own essential nature, so also the manner or mode of formal being belongs to the causes of these ideas (at least to the first and principal) in their own essential nature. And although it may happen that one idea gives birth to another idea,

that nevertheless cannot continue *ad infinitum*, but a primary idea must ultimately be arrived at, whose cause may be as a pattern or original in which is contained, formally and indeed, all the reality or perfection which is met with in these ideas only objectively or by representation. So that natural light makes me plainly aware that ideas are in me like pictures or images, which can in truth easily fall away from the perfection of the things from which they have been derived, but which can never contain anything greater or more perfect.

And the more lengthily and carefully I examine all these things, so much the more clearly and distinctly I know them to be true. But what shall I conclude from all this? I conclude that if the reality or objective perfection of some one of my ideas is such that I may clearly know that this same reality or perfection is not in me either formally or eminently, and that consequently I cannot myself be its cause, it necessarily follows that I am not alone in the world, but that there is yet some other thing which exists and which is the cause of this idea; while that if there occurs in me no such idea, I shall have no argument which can convince me and make me certain of the existence of any other thing than myself, for I have sought

them most carefully, and up to the present I have been able to find none.

Now among all these ideas which are in me, besides the one which represents me to myself, in which there cannot be any difficulty, there is another which represents to me a God; others, corporeal and inanimate things; others, angels; others, animals; and lastly, those which represent to me men like myself. But as regards the ideas which represent to me other men, or animals, or angels, I easily conceive that they may be formed by a mingling and composition of other ideas which I have of corporeal things and of God, although, except myself, there were no other men in the world, nor any animals, nor any angels. And as regards the ideas of corporeal things, I recognise in them nothing so great or so excellent that it seems it could not emanate from myself; for if I consider them more closely, and examine them in the same way that I examined yesterday the idea of the wax, I find that there is but very little in them which I conceive clearly and distinctly; that is to say, size or extension in length, breadth, and depth, the shape which results from the limitation of this extension, the position which diversely shaped bodies keep among themselves with regard to one another, and motion, or the change of this

position, to which may be added substance, duration, and number. As for other things, such as light, colours, sounds, odours, tastes, heat, cold, and other qualities which are manifested upon contact, they occur in my thought with so much obscurity and confusion that I am ignorant even whether they are true or false, that is to say, whether the ideas which I conceive of these qualities are indeed the ideas of some real things, or whether they represent to me merely chimerical beings which cannot exist. For although I have remarked above that it is only in one's judgments that true and formal falsity can be met with, there can nevertheless be found a certain material falsity in ideas, that is to say, when they represent what is nothing as if it were something. For example, the ideas that I have of heat and cold are so obscure and indistinct, that they cannot teach me whether cold is only absence of heat, or heat an absence of cold, or whether both are real qualities, or whether they are not; and more especially as, ideas being like images, there can be none of them which does not seem to represent something to us, if it is true to say that cold is nothing but a deprivation of heat, the idea which represents cold to me as something real and positive will not inappropriately be termed false, and so with others.

But to tell the truth, there is no need for me to attribute them to any other author but myself; for if they are false, that is to say, if they represent things which are not, natural light shows me that they proceed from nothing, that is to say, that they are in me only because there is something lacking in my nature, since that nature is not all perfect; and if these ideas are true, yet because they present to me so little reality that I cannot even distinguish the thing represented from the non-existent, I do not see why I could not be the author of them.

As for the clear and distinct ideas which I have of corporeal things, there are some which, it seems to me, might possibly have been derived from the idea which I have of myself, such as those which I have of substance, duration, number, and similar things. For when I think that a stone is a substance, or a thing which of itself is capable of existing, and that I myself also am a substance, although I indeed conceive that I am a thing which thinks, and without extension, and that the stone, on the contrary, is a thing which has extension and does not think, and that thus between these two conceptions a notable difference is to be met with, they seem nevertheless to agree in this point,—that they both represent substances.

In the same way, when I reflect that I exist now, and that I recollect besides having existed before, and that I conceive many divers thoughts of which I know the number, then I acquire in myself the ideas of duration and of number, which afterwards I can apply to every other thing that I will.

As regards other qualities of which the ideas of corporeal things are composed, namely, extension, shape, position, and motion, it is true that they are not formally in me, since I am only a thing which thinks; but because these are only certain modes of substance, and because I myself am a substance, it seems that they can be contained in me eminently.

There remains, therefore, the single idea of God, in which I have to consider if there is anything which could not have come from myself. By the word God I mean a substance infinite, eternal, immutable, independent, all-knowing, all-powerful, and by which myself, and all other things which exist (if it is true that there are other things which exist), have been created and produced. Now these advantages are so great and so eminent, that the more attentively I consider them, the less I am persuaded that the idea that I have of them could derive its origin from me alone. And, in consequence, it must necessarily be concluded from

all this that I have already said, that *God exists*. For although the idea of substance is in me, even because I am a substance, I should not, nevertheless, have the idea of an infinite substance, I who am a finite being, if it had not been put in me by some substance truly infinite.

And I ought not to imagine that I do not conceive the infinite by a positive idea, but only by the negation of that which is finite, in the same way that I understand rest and darkness by the negation of motion and light; since, on the contrary, I plainly see that more reality is encountered in the infinite substance than in the finite substance, and, therefore, that I somehow have in me the notion of the infinite before that of the finite, that is to say, the notion of God before the notion of myself; for how would it be possible for me to know that I doubt, and that I desire, that is, that something is wanting in me, and that I am not all perfect, if I had not within me the idea of a being more perfect than mine, by comparison with which being I should know the defects of my nature?

And it cannot be said that this idea of God may be materially false, and, consequently, that I can derive it from nothing, that is to say, that it can be in me because I am defective, as I have already said with regard to the ideas of heat and cold, and

similar things; for, on the contrary, this idea being very clear and very distinct, and containing in itself more objective reality than any other, there is no idea which of itself is more true, or which can be less suspected of error and falsity.

This idea, I say, of a being sovereignly perfect and infinite is very true; for although perhaps it might be feigned that such a being does not exist, nevertheless it cannot be feigned that the idea of him does not represent to me anything real, as I have already said of the idea of cold. It is also very clear and distinct, since all that my mind conceives clearly and distinctly of the real and the true, and which contains in itself some perfection, is contained and enclosed entirely in this idea. And this does not cease to be true, although I comprehend not the infinite, and though there is in God an infinity of things which I cannot comprehend, and to which, may be, even my thought can in nowise attain; for it belongs to the nature of the infinite that I, who am finite and limited, cannot comprehend it, and it suffices that I understand that well, and that I judge that all the things which I conceive clearly, and in which I know there is some perfection, and perhaps also an infinity of other things of which I am ignorant, are in God, formally or eminently. in

order that the idea which I have of Him may be the most true, the most clear, and the most distinct of all which are in my mind.

But also it may be that I am something more than I imagine, and that all the perfections which I attribute to the nature of a God are in some manner in me potentially, although they do not yet come forward or reveal themselves through actions. Indeed, I already experience that my knowledge increases and perfects itself little by little, and I see nothing which can prevent its thus increasing more and more up to infinity, nor, also, since it is thus increased and perfected, why I could not acquire by its means all the other perfections of the divine nature, nor, finally, why the power which I have of acquiring these perfections, if it be true that it is now within me, should not be sufficient to produce the ideas of them. Yet in considering it a little more closely, I recognise that that cannot be; for, in the first place, although it were true that my knowledge attained every day to new degrees of perfection, and that there were many things in my nature potentially, which are not yet there actually, nevertheless all these advantages do not belong to the idea that I have of the Divinity, and do not in any way approximate to this idea, in which there is

nothing which is merely potential, but which contains everything actually and indeed. And is not this also an infallible and very certain argument for imperfection in my knowledge, that it grows little by little and increases by degrees? Besides, although my knowledge increases more and more, nevertheless I do not fail to perceive that it cannot be actually infinite, since it will never arrive at such a high degree of perfection that it will not be capable of attaining to a yet greater growth. But I conceive God to be actually infinite in so high a degree, that nothing can be added to His sovereign perfection. And finally, I can easily understand that the objective being of an idea cannot be produced by a being which exists only potentially, which, to speak correctly, would be a nonentity, but only by a formal or actual being.

And I certainly see nothing in all that I have just said, which is not very easily recognised through natural light by all who will give it careful consideration; but when I relax my attention somewhat, my mind, finding itself clouded, and blinded, as it were, by the images of sensible things, does not easily recollect the reason why my idea of a being more perfect than my own should necessarily have been put in me by a

being who is indeed more perfect than I. This is why I wish to pass on, and consider whether I myself, who have this idea of God, could exist if there were no God. And I ask, from whom should I derive my existence? Perhaps from myself, or from my parents, or from some other causes less perfect than God; for nothing can be imagined which is more perfect than He, or even equal to Him.

Now if I were independent of every other, and if I myself were the author of my being, I should not doubt anything, I should conceive no desires, and, in short, no perfection would be wanting in me, for I should have given myself all those perfections of which I have any idea within me, and thus I should be God. And I ought not to imagine that the things which are lacking in me are perhaps more difficult to acquire than those of which I am already in possession, for, on the contrary, it is very certain that it would be far more difficult for me, that is to say, a thing or a substance which thinks, to proceed from a nonentity, than it would be for me to acquire the understanding and the knowledge of many things of which I am ignorant, and which are merely accidents of this substance; and certainly, if I had given myself these things I have just spoken of, that is to say,

if I myself were the author of my being, at least I would not have denied myself things which can be had more easily, as an infinity of knowledge of which my nature finds itself destitute can be: I would not even have denied myself any of the things which I see are contained in the idea of God, because there is none of them which seems to me more difficult to cause or acquire; and if there were any one of them which was more difficult, certainly it would appear to me such (supposing that I had from myself all the other things I possess) because in that I should see the limitation of my power.

And although I might be able to suppose that I may always have been as I am now, I cannot, for all that, evade the force of this argument, and do not cease to be aware that it is necessary that God be the author of my being: for all the time of my life can be divided into an infinity of parts, each of which in nowise depends on the rest, and thus it does not follow that because I existed a little while ago, I ought to exist now, unless at this moment some cause produces me, and creates me, so to speak, over again, that is to say, conserves me.

Indeed, it is very clear and most evident (to all those who will give attentive consideration to the nature of time) that a substance, in order to be conserved every moment of its duration, re-

quires the same power and the same action which would be necessary to produce it and create it entirely afresh, supposing it did not exist already. So that this is a thing which natural light shows us clearly,—that conservation and creation differ only in regard to our mode of thought, and not in actuality.

Therefore I have only to interrogate myself and consult with myself, in order to see whether I have within me any power and virtue by means of which I can cause that I who exist now, may exist again a moment after. For since I am nothing but a thing which thinks, or at least, since up to the present it is precisely that particular part of myself which alone is concerned, if such a power resided within me, certainly I ought at least to think it and be aware of it, but I feel nothing of the kind in me, and thence I know for certain that I depend on some being different from myself.

But it may be that that being on whom I depend is not God, and that I am produced by my parents, or by some other cause less perfect than He? Far from it, that cannot be. For, as I have already said above, it is very evident that there ought to be at least as much reality in the cause as in its effect, and therefore, since I am

a thing which thinks, and which has within itself some idea of God, whatever be the ultimate cause of my existence, it must of necessity be acknowledged that this cause is also a thing which thinks, and that it has in itself the idea of all the perfections which I attribute to God. Then one may begin to inquire all over again whether this cause derives its origin and its existence from itself, or from some other thing. For if it derive it from itself, it follows from the reasons that I have adduced above, that this cause is God, since that, having the virtue of being and existing by itself, it ought also, without doubt, to have the power of possessing actually all the perfections of which it has the ideas within it, that is to say, all those that I conceive to be in God. For if it derives its existence from some cause other than itself, we shall ask again, for the same reason, whether this second cause is caused by itself, or otherwise, until by degrees we finally arrive at an ultimate cause, which will be found to be God. And therein it is very manifest that there can be no progression to the infinite, seeing that it is not so much the cause which formerly produced me, which is concerned here, as that which conserves me in the present.

Nor can we feign that many causes together

may have concurred in sharing my production, and that from one of them I have received the idea of one of the perfections which I attribute to God, and from another the idea of some other, so that all these are indeed to be found in some part of the universe, but do not occur conjoined and gathered together in one Being alone, which is God. For, on the contrary, the unity, the simplicity, or the inseparability of all the things which are in God is one of the principal perfections which I conceive to be in Him; and certainly the idea of this unity of all God's perfections could not have been put in me by any cause which has not also given me the ideas of all the other perfections. For this cause could not have been able to make me comprehend all these perfections joined together and inseparable, without having made me at the same time to know in some measure what they are, and in some way to recognise each one of them.

Finally, as regards my parents, from whom it appears that I derive my birth, although all that I have ever been able to believe of them be true, that nevertheless does not make it to be they who conserve me, nor even that it is they who have made and produced me in so far as I am a thing which thinks, there being no connection

between the natural process by which I have been accustomed to believe that I was begotten, and the production of such a substance. But, at the most, what they have contributed to my being is that they have put certain tendencies into the matter in which I have hitherto judged that I (that is to say, my mind, which alone I am now taking as myself) am contained, and therefore there cannot be any difficulty here with regard to them, but it must necessarily be concluded that from the mere fact that I exist, and that the idea of a sovereignly perfect being (that is to say, of God) is in me, the existence of God is very evidently demonstrated.

It only remains for me now to examine in what way I have acquired this idea. For I have not received it through the senses, and it was never offered to me against my expectation, like the ideas of sensible things, when these things present themselves, or appear to present themselves, to my exterior organs of sense. Neither is it a pure production or fiction of my mind, for it is not in my power to diminish it or to add anything to it; and consequently there is nothing more for me to say, except that this idea was born and produced with me at the time I was created, in the same way as the idea of myself.

And truly it ought not to be considered strange that God, in creating me, has put into me this idea, to be as the mark of the workman imprinted on his work. Nor is it necessary for this mark to be something different from the work itself. But from the fact alone that God created me, it is most credible that He in some way produced me in His image and likeness, and that I conceive this likeness (in which the idea of God is contained) by the same faculty as that by which I conceive myself; that is, when I reflect on myself I am not only aware that I am an imperfect thing, incomplete and dependent on something else, which ceaselessly strains and aspires towards something better and greater than itself, but I also recognise at the same time that he on whom I depend possesses in himself all those great things towards which I aspire, and of which I find the ideas within me,—not indefinitely, and merely potentially, but that He enjoys them indeed, actually and infinitely, and thus that He is God. And all the force of the argument of which I have here made use in order to prove the existence of God, consists in this:—That I recognise that it would not be possible for my nature to be such as it is, that is to say, for me to have the idea of a God within me, if God did not truly exist,—this same God, I say, of whom

the idea is within me, that is, who possesses all those high perfections of which our mind can indeed have some slight idea, without, however, the power to comprehend them; who is subject to no defects, and who has nothing which evidences any imperfection. Whence it is sufficiently plain that He cannot be a deceiver, since natural light teaches us that deceit necessarily depends on some defect.

But before I examine that more carefully, and pass to the consideration of other truths which may be gathered from it, it seems to me very appropriate that I should pause a while to contemplate this all-perfect God, to ponder at leisure His marvellous attributes, to consider, to admire, and to adore the incomparable beauty of this great light, at least so far as the strength of my mind, which stands in some measure dazzled before it, may allow me.

For as we learn by faith that the sovereign felicity of the other life consists solely in this contemplation of the Divine Majesty, so let us make trial from henceforth whether a like meditation, although incomparably less perfect, will make us enjoy the greatest contentment that we are capable of feeling in this life.

FOURTH MEDITATION.

OF THE TRUE AND THE FALSE.

I have so accustomed myself during the past few days to detach my mind from the senses, and I have so accurately observed that concerning corporeal substances we know but very little, that concerning the human mind we know very much more, and that concerning God Himself we know yet more still, that it will now be easy for me to turn my thought from the consideration of sensible or imaginable things, in order to carry it towards those which, being freed from all matter, are purely intellectual.

And certainly the idea that I have of the human mind, in so far as it is a thing which thinks, and which has no extension in length, breadth, and depth, and which participates in nothing which belongs to the body, is incomparably more distinct than the idea of any corporeal thing; and when I consider that I doubt, that is to say, that I am an incomplete and dependent thing, the idea of a complete and independent being, that is to say, of God, presents itself to my mind with so much distinctness and clearness, and from the mere fact that this idea is in me, or that I am, or exist,—I,

who possess this idea,—I so surely conclude the existence of God, and that my existence depends entirely on Him every moment of my life, that I do not think the human mind can be cognisant of anything with more evidence and certainty. And already it seems to me that I discover a road which shall lead us from this contemplation of the true God (in whom all the treasures of knowledge and wisdom are contained) to the knowledge of other things in the universe.

For, in the first place, I recognise that it is impossible that He ever deceives me, since in all fraud and deceit there is some sort of imperfection to be met with: and although it seems that it is a mark of subtilty, or of power, to be able to deceive, yet to wish to deceive testifies without doubt to feebleness or malice. And therefore deceit cannot be met with in God.

And then I am aware by my own experience that there is within me a certain faculty of judging, or of discerning the true from the false, which without doubt I have received from God, as well as all the other things which are within me and possessed by me; and since it is impossible that He should wish to deceive me, it is also certain that He has not made this faculty such that I can ever fail, when I make use of it in the proper way.

And there would remain no doubt on that point, it seems, if we could not draw from it this inference,—that thus, therefore, I can never deceive myself; for if all that is within me comes from God, and if He has not put in me any faculty of failure, it appears that I ought never to delude myself. Thus it is true that, when I regard myself merely as coming from God, and when I turn myself entirely towards Him, I do not discover within me any cause of error or of falsity; but immediately after returning to myself, experience makes me aware that I nevertheless am subject to an infinity of errors. And on coming to seek the cause of these errors, I notice that not only is there present to my thought a real and positive idea of God, or of a sovereignly perfect being, but also, so to speak, a certain negative idea of the nothing, that is to say, that which is infinitely remote from every kind of perfection, and that I am as a centre between God and nothing, that is, placed in such wise midway between the sovereign Being and the non-being, that truly there does not occur in me anything which is able to lead me into error, insomuch as a sovereign Being has produced me; but that if I consider myself as participating in some way in the nothing or non-being, that is to say, insomuch as I am not myself the sovereign

being, and that many things are lacking to me, I find myself exposed to an infinity of deficiencies, so that I ought not to be surprised if I do deceive myself.

In this way I know that error, being what it is, is not something real which depends on God, but only a defect; and therefore that in order to fail I have no need of a faculty given to me from God for that particular purpose, but that it may happen that I deceive myself because the power which God has given me to discern the true from the false is not infinite in me.

I am not quite satisfied yet, however, for error is not a pure negation, that is to say, it is not a simple deficiency or lack of some perfection which is nothing to do with me, but it is the deprivation or want of some knowledge which it seems I ought to possess. Now in considering the nature of God, it does not appear possible that He should have put in me any faculty which is not perfect of its kind, that is to say, a faculty lacking some perfection which it ought to have; for if it is true that the more expert the artificer, the more perfect and finished the works which come from his hands, what thing can have been produced by this sovereign creator of the universe, which is not perfect and complete in all its parts? And

certainly there is no doubt that God could have created me so that I might never deceive myself; it is also certain that He always wills what is best; is it then a better thing for me to be able to deceive myself than not to be able to do so?

When I consider that attentively, the first thing that occurs to my mind is that I ought not to be surprised if I am not capable of understanding why God does what He does; and that His existence must not be doubted because, may be I see by experience many other things which exist, without being able to comprehend for what reason, or in what way, God has made them; for knowing already that my nature is extremely feeble and limited, and that God's, on the contrary, is immense, incomprehensible, and infinite, I no longer have any difficulty in recognising that there is an infinity of things in His power, whose causes are beyond the reach of my mind: and this one reason alone is sufficient to persuade me that the kind of causes which we are accustomed to call final is of no use in physical or natural matters; for it does not seem to me that I can without rashness seek out and undertake to discover the impenetrable purposes of God.

Again, it occurs to me that we ought not to consider one single creature separately when

inquiring whether the works of God are perfect, but generally all the creatures together; for the same thing which might, perhaps, with some sort of reason, appear very imperfect if it were all alone in the world, would not fail to be very perfect when considered as forming part of the whole universe: and although, since I formed the design of doubting everything, I have not yet known anything for certain, except my own existence and God's, yet, also, since I have recognised the infinite power of God, I cannot deny that He may have produced many other things, or at least that He could have produced them, so that I exist and am put into the world as forming part of the universality of every being.

Being led by this to look more closely at myself, and to consider what my errors are (which alone testify that there is imperfection within me), I find that they depend on the concurrence of two causes, namely, the faculty of knowing, which is within me, and the faculty of choice or free will, that is to say, of my understanding together with my will. For by the understanding alone I neither affirm nor deny anything, but I merely conceive the ideas of things which I may affirm or deny. For in considering the understanding thus exactly, it may be said that

there is never any error in it, provided that the word error is taken in its proper signification. And although, perhaps, there may be an infinity of things in the world of which I have no idea in my understanding, it cannot therefore be said that my understanding is deprived of these ideas, as of something which is due to its nature, but only that it has them not, because indeed there is no reason which can prove that God ought to have given me a greater and wider faculty of knowing than He has given me; and however skilful and wise a workman I picture Him, I ought not on that account to think that He ought to have put into each of His works all the perfections which He is able to put into some. Nor can I complain that God has not given me a free will, or a sufficiently ample and perfect will, since I indeed experience it to be so ample and so extensive that it has no limits. And what seems to me here very remarkable, is that of all the other things which are in me there is none so perfect and so great that I may not recognise plainly that it might be yet greater and more perfect. For, for example, if I consider the faculty of conception which is in me, I find it is of a very small extent and greatly limited, and then I represent to myself the idea of another

faculty much ampler, and even infinite, and from the mere fact that I can represent the idea of it to myself, I know without difficulty that this greater faculty belongs to the nature of God. In the same way, if I examine the memory, or the imagination, or any other faculty which is in me, I find none which is not very small and narrow, and which in God is not immense and infinite. It is only the will, or the mere liberty of free choice, which I feel to be so great within me that I cannot conceive the idea of any other will ampler and more extensive; so that it is the will, principally, which makes me aware that I bear the image and likeness of God. For although the will be incomparably greater in God than in me, whether because of the knowledge and power which are joined to it and make it firmer and more efficacious, or whether because of its object, seeing that it reaches and extends infinitely to many things, it yet does not seem to me greater, if I consider it formally and exactly in itself. For will consists only in our being able to do this or that, or not to do it (that is, affirm or deny, follow or avoid a certain thing), or, rather, it consists only in this,—that in order to affirm or deny, pursue or avoid the things which the understanding proposes to us, we act in such a way that we do

not feel constrained to it by any external force. For in order for me to be free, it is not necessary for me to be indifferent as to whether I choose the one or the other of the two opposites, but rather, the more that I incline towards the one, whether I know evidently that the good and the true are to be found in it, or whether God thus disposes the inmost part of my thought, the more freely I choose and embrace it; and certainly the divine grace and natural knowledge, so far from diminishing my liberty, rather increase and strengthen it, so that the indifference that I feel when I am not disposed towards one side rather than another by the weight of some reason, is the lowest degree of liberty, and shows a deficiency in knowledge rather than a perfection in the will. For if I always knew clearly what is true and what is good, I should never have any difficulty in resolving what judgment and choice I ought to make, and thus I should be entirely free without ever being indifferent.

From all this I perceive that it is not the power to will, which I have received from God, which is the cause of my errors, for it is very wide and very perfect of its kind; neither is it the power of understanding or conceiving which causes them; for conceiving nothing but by means of this power

of conception given to me by God, without doubt all that I conceive, I conceive as it must be, and it is not possible that I deceive myself therein. Whence, then, do my errors spring? Merely from the fact that the will being much ampler and more extended than the understanding, I do not confine it within the same limits, but extend it also to things which I do not understand; and being itself indifferent to these, it is very easily led astray, and chooses the false for the true, and evil for good. In this way I deceive myself, and sin.

For example, while examining during these last few days whether anything really existed in the world, and knowing that from the fact that I examined this question it plainly followed that I existed myself, I could not prevent myself from judging that a thing which I conceived so clearly was true. Not that I found myself forced to that conclusion by any external cause, but only because a great clearness which was in my understanding was followed by a great inclination in my will, and I am inclined to believe with all the more liberty, that I find myself to have less indifference. On the contrary, at present I not only know that I exist, insomuch as I am something which thinks, but a certain idea of the corporeal nature also

presents itself to my mind, which makes me doubt whether the nature which thinks, which is in me, or rather which is I myself, is different from this corporeal nature, or whether the two are not but the same thing. And here I assume that I do not yet know any reason which can persuade me of one opinion rather than the other: whence it follows that I am entirely indifferent as to whether I deny it, or affirm it, or even abstain from giving any judgment upon it.

And this indifference not only extends to the things of which the understanding has no knowledge, but also, as a rule, to all those which it does not perceive perfectly clearly at the moment when the will deliberates upon them; for however probable the conjectures which render me inclined to judge some one thing, the mere knowledge that they are only conjectures and not certain and indubitable reasons, is sufficient to give me occasion of judging the contrary. This I have sufficiently experienced these last few days, when I have assumed as false all that I have formerly held to be quite true, only because I have noticed that it might in some way be doubted.

For if I abstain from giving my judgment on a thing when I do not conceive it with sufficient

clearness and distinctness, it is evident that I do well, and that I am not deceived. But if I resolve to deny it, or affirm it, then I do not make the use I should of my free will, and if I affirm what is not true, it is evident that I deceive myself; even although I judge according to the truth, it is only by chance that that happens, and I fail all the same, and misuse my free will. For natural light teaches us that the knowledge of the understanding ought always to precede the determination of the will. And it is in this misuse of the free will that is found the deprivation which constitutes the body of error. The deprivation, I say, occurs in the operation, in so far as it proceeds from me; but it is not in the faculty which I have received from God, nor even in the operation in so far as it depends on Him, for I certainly have no reason to murmur because God has not given me a wider intelligence or a brighter natural light than He has given me, since it belongs to the nature of a finite understanding not to understand many things, and to the nature of a created understanding to be finite. But because, though He has never owed me anything, He has nevertheless given me such small perfections as are in me, I have every reason to render Him thanks, so far from conceiving sentiments so wrong as to imagine

that He has taken from me, or unjustly withheld, such other perfections as He has not given me.

Nor have I any cause to complain that He has given me a will more ample than my understanding, since, as the will consists only in one single thing, and as indivisible, it seems that its nature is such that nothing can be taken away from it without destroying it; and certainly, the more extended it is, the more I have to thank the goodness of Him who has given it me.

Nor, finally, ought I to murmur because God concurs with me in forming the actions of this will, that is to say, the judgments in which I deceive myself, because these actions are entirely true, and absolutely good, in so far as they depend on God, and there is in some way more perfection in my nature, because I am able to form them, than if I were not able to form them. And the deprivation in which alone consists the formal cause of error and of sin, has no need of the concurrence of God, because it is not a thing, or a being, and because if we connect it with God as its cause, it ought not to be called deprivation, but only negation, according to the signification which is given to these words in the school. For indeed it is not an imperfection in God, that He has given me the liberty of giving my judgment

or withholding it, on certain things of which He has not put a clear and distinct knowledge into my understanding, but without doubt it is an imperfection in me that I do not use this liberty well, and that I rashly give my judgment on things which I conceive only with obscurity and confusion.

Nevertheless I see that it were easy for God to work so that I might never deceive myself, although I remained free, and of a limited knowledge; for example, if He had given my understanding a clear and distinct intelligence of all the things on which I ought ever to deliberate, or if only He had so deeply engraven in my memory the resolution never to judge anything without conceiving it clearly and distinctly, that I could never forget it. And I plainly see that in so far as I consider myself alone, just as if there were only myself in the world, I should have been much more perfect than I am, if God had created me so that I might never fail. But I cannot on that account deny that it is in some way a greater perfection in the universe that some of its parts are not exempt from defects, and that others are than if they were all alike.

And I have no right to complain that God, having put me into the world, has not willed

to set me among the noblest and most perfect things: I have even cause for content, in that if He has not given me the perfection of never failing, by the first means that I have set forth above,—namely, that which depends on a clear and evident knowledge of all the things on which I can deliberate,—He has at least left in my power the other means, namely, that of holding firmly the resolve never to give my judgment on things whose truth is not clearly known to me; for although I experience in myself the weakness of being unable to attach my mind continually to the same thought, yet, by attentive meditation frequently repeated, I can impress it so firmly in my memory that I never fail to recollect it every time I have need of it, and thus acquire the habit of never failing. And seeing that that is what constitutes man's greatest and principal perfection, I deem that I have gained not a little to-day by this meditation, in having discovered the cause of error and falsity.

And certainly there can be no other causes of error but the one I have just explained. For it cannot be that I deceive myself every time I so confine my will within the limits of my knowledge, that it makes no judgment except on things clearly and distinctly represented to it by the understanding;

because every clear and distinct conception is without doubt something, and thus cannot derive its origin from nothing, but must necessarily have God for its author,—God, I say, who, being sovereignly perfect, cannot be the cause of any error: and consequently it must be concluded that such a conception or such a judgment is true.

For the rest, I have not only learned to-day what I have to avoid in order to fail no more, but also what I ought to do in order to arrive at the knowledge of truth. For certainly I shall arrive at it if I allow my attention to dwell long enough on all the things that I conceive perfectly, and if I separate them from other things which I conceive only with confusion and obscurity, to which, from this time forward, I shall take careful heed.

FIFTH MEDITATION.

OF THE ESSENCE OF MATERIAL THINGS, AND AGAIN OF GOD, THAT HE EXISTS.

There remain to me many other things to examine concerning the attributes of God, and touching my own nature, that is to say, the nature of my mind; but another time, perhaps, I will take

up this inquiry. For the present (after having noticed what it is necessary to do or to avoid in order to arrive at the knowledge of truth) what I chiefly have to do is to try and emerge from the doubts into which I have fallen during these past days, and rid myself of them all, and see whether we cannot know something certain touching material things.

But before I examine whether any things of the kind exist outside myself, I ought to consider the ideas of them, so far as they are in my thought, and see which of these ideas are distinct and which are confused.

In the first place, I distinctly imagine the quantity which philosophers commonly call continued quantity, or the extension in length, breadth, and depth which is in this quantity, or rather, in the thing to which it is attributed. Again, I can enumerate many different parts of it, and attribute to each part all kinds of sizes, shapes, positions, and motions; and finally, I can assign to each motion all sorts of durations. And I not only know these things with distinctness, when I thus consider them generally, but also, however little I apply my attention to them, I come to recognise an infinity of particulars concerning numbers, shapes, motions, and similar things, the truth of

which manifests itself so evidently, and agrees so well with my nature, that when I begin to discover these things, it does not seem to me that I apprehend anything fresh, but rather that I call to remembrance something I already knew before, that is to say, that I perceive things which were already in my mind, although I had not as yet directed my thought towards them.

And what I find most important here, is that I discover in myself an infinity of ideas of certain things which cannot be estimated as pure non-entities, notwithstanding that they may perhaps have no existence outside my thought, and which are not feigned by me, although I am free to think them, or not to think them, but which have their true and immutable natures. As, for example, when I imagine a triangle, although perhaps no such figure exists or ever has existed in any part of the world except my thought, there nevertheless does not fail to be a certain nature or form or essence determined by this figure, which is immutable and eternal, which I have not invented, and which in no way depends on my mind, as is shown by the fact that one can demonstrate divers properties of this triangle,—for example, that its three angles are equal to two right angles, that the greatest angle is sustained by the greatest side,

and similar things, which, whether I will or no, I now recognise very clearly and very evidently to be in it, although I did not think of them before in any way, when I imagined a triangle for the first time; and thus it cannot be said that I have feigned and invented them.

And I cannot object here that perhaps this idea of the triangle has entered my mind by the medium of my senses, through my having sometimes seen bodies of a triangular shape; for I can form in my mind an infinity of other figures concerning which there cannot be the least suspicion that they have ever fallen under my senses, and nevertheless I do not fail to be able to demonstrate divers properties concerning their nature, as well as concerning the nature of the triangle, which certainly ought all to be true, since I conceive them clearly, and thus they are something, and not a pure nonentity. For it is very evident that all which is true is something, truth being one with existence, and I have already amply demonstrated above that all the things which I know clearly and distinctly are true. And although I had not demonstrated it, yet the nature of my mind is such that I cannot prevent myself from esteeming them true, so long as I conceive them clearly and distinctly; and I

recollect that even when I was yet very strongly attached to the objects of the senses, I considered as among the number of the most constant truths those which I conceived clearly and distinctly as regards shapes, numbers, and the other things which belong to arithmetic and geometry.

And now, if from the mere fact that I can extract from my thought the idea of something, it follows that all which I recognise clearly and distinctly as belonging to this thing belongs to it indeed, can I not draw therefrom an argument, and a demonstrative proof of the existence of God? It is certain that I do not find the idea of Him, that is to say, the idea of a being sovereignly perfect, any less in me than the idea of some figure or some number; and I do not recognise that an actual and eternal existence belongs to His nature less clearly and distinctly than I recognise that all that I can demonstrate of some figure or of some number belongs truly to the nature of this figure or this number; and thus although all that I have concluded in the preceding meditations were untrue, the existence of God should pass in my mind for at least as certain as I have hitherto esteemed the truths of mathematics to be, which regard only numbers and figures, although, indeed, that does

not at first seem entirely manifest, but seems to have some appearance of sophistry. For being accustomed, as regards everything else, to draw a distinction between existence and essence, I easily persuade myself that existence can be separated from the essence of God, and that thus God can be conceived as not actually existing. But nevertheless, when I think of it more attentively, it is manifest that existence can no more be separated from the essence of God, than the size of its three angles equal to two right angles can be separated from the essence of a rectilinear triangle, or the idea of a valley from the idea of a mountain; so that it is no less repugnant to conceive a God (that is to say, a sovereign perfect being) who lacks existence (that is to say, to whom some perfection is wanting) than to conceive a mountain which has no valley.

But although, indeed, I can no more conceive a God without existence than I can conceive a mountain without a valley, yet, as from the mere fact that I conceive a mountain with a valley, it does not follow that there is any mountain in the world; so, also, although I conceive God as existing, it does not seem to follow, on that account, that God exists; for my thought imposes no necessity on things, and as it rests but with

myself to imagine a winged horse, although there be no horse which has wings, I should thus perhaps be able to attribute existence to God, although there were no God existing.

Far from it: it is here that there is a sophism, masked by the probability of this objection; for because I cannot conceive a mountain without a valley, it does not follow that there is any mountain in the world, or any valley, but merely that the mountain and the valley, whether they exist or whether they do not exist, are inseparable the one from the other; whereas from this alone—that I cannot conceive God except as existing—it follows that existence is inseparable from Him, and thus that He truly exists. Not that my thought could make that to be, or that it imposes any necessity on things; but, on the contrary, the necessity which is in the thing itself, that is to say, the necessity of the existence of God, causes me to have this thought, for I am not at liberty to conceive a God without existence, that is to say, a sovereignly perfect being without a sovereign perfection, as I am at liberty to imagine a horse with wings, or without them.

And here it ought not to be said that in truth it is necessary that I acknowledge that God exists, after having supposed Him to possess all sorts of

perfections, since existence is one of them, but that my first supposition was not necessary, any more than it is necessary to think that all four-sided figures can be inscribed in the circle; but supposing I have this thought, I am constrained to acknowledge that the rhombus, since it is a four-sided figure, can be inscribed there, and thus I shall be constrained to acknowledge a falsity. That, I say, ought not to be alleged; for although it is not a necessity that I ever fall into any thought of God, nevertheless, every time that I happen to think of a premier and sovereign being, and to select, so to speak, the idea of him from my mind's treasure, it is a necessity that I attribute to him every sort of perfection, although I may not come to enumerate them all, and to fix my attention on each of them in particular. And this necessity is sufficient (so soon as I come to recognise that existence is a perfection) to make me plainly conclude that this premier and sovereign being exists, in the same way that it is not necessary for me ever to imagine any triangle; but every time I wish to consider a rectilinear figure composed only of three angles, it is absolutely necessary that I attribute to it all the things which serve to show that its three angles are not greater than two right angles, although perhaps

I do not at the moment consider that fact in particular. But when I examine what figures are capable of being inscribed in the circle, it is in nowise necessary that I think that all four-sided figures are included in them; on the contrary, I cannot even feign that that is so, as long as I shall desire to receive into my thought nothing but what I shall be able to conceive clearly and distinctly. And consequently there is a great difference between the false suppositions, like this one, and the true ideas which are born with me, of which the premier and principal is that of God.

For I indeed recognise in many ways that this idea is not something feigned or invented, depending only on my thought, but that it is the image of a true and immutable nature; in the first place, because I cannot conceive any other thing than God alone, to whose essence existence belongs of necessity, and in the second, because it is not possible for me to conceive two or more Gods such as He, and assuming that there is one such who now exists, I see clearly that it is necessary that He must have existed before all eternity, and that He will be eternally in the future; and finally, because I conceive many other things in God which I can in nowise change or diminish.

For the rest, whatever proof and argument I make use of, I must always come back to this point,—that it is only the things which I conceive clearly and distinctly which have the power of entirely persuading me. And although among the things that I conceive in this manner there may indeed be some manifestly known to every one, and some also which reveal themselves only to those who consider them more closely, yet after they are once discovered they are esteemed no less certain than the others. As, for example, although in every rectilinear triangle it does not at first appear that the square of the base is equal to the squares of the two other sides so plainly as it does that this base is opposite to the greatest angle, nevertheless, as soon as that has once been recognised, we are as fully persuaded of the truth of the one as of the other. And certainly as regards God, if my mind were not prepossessed by old prejudices, there would not be anything which I recognised sooner or more easily than Him. For is there anything which is of itself more clear and manifest than the thought that there is a God, that is to say, a sovereign and perfect being, in the idea of whom alone necessary or eternal existence is comprised, and who, therefore, exists?

And although to conceive this truth plainly I

needed great mental application, yet at present I not only rely on it no less surely than on all which appears to me most certain, but, in addition, I remark that the certainty of all other things depends on it so absolutely, that without this knowledge it is impossible ever to be able to know anything perfectly.

For although my nature is such that as soon as I comprehend something very clearly and very distinctly, I cannot prevent myself from believing it to be true; yet because this nature of mine is also such that I cannot keep my mind continually attached to the same thing, and recollect having often judged a thing to be true, when I cease to consider the reasons which obliged me to judge it to be so, it may then happen that other reasons present themselves to me which would easily make me alter my opinion if I were ignorant that a God existed, and thus I should never have a true and certain knowledge of anything at all, but only vague and uncertain opinions.

As, for example, when I consider the nature of the rectilinear triangle, I know for certain—I who am a little versed in geometry—that its three angles are equal to two right angles, and it is impossible for me not to believe it, so long as I apply my thought to its demonstration, but as

soon as I turn away from it, although I may remember having clearly comprehended it, yet it can easily happen that I doubt its truth, if I am ignorant that a God exists; for I can persuade myself that I have been made by nature in such a way that I can easily deceive myself even in the things which I believe I understand with the most clearness and certainty, seeing, chiefly, that I remember often having reckoned many things as true and certain, which other reasons have afterwards led me to judge absolutely false.

But after having recognised that there is a God, because at the same time I have also recognised that everything depends on Him, and that He is not a deceiver, and consequently have judged that all which I conceive clearly and distinctly cannot fail to be true; although I no longer think of the reasons by which I have judged that to be true, provided only that I recollect having clearly and distinctly comprehended it, no contrary reason can be brought forward which may ever make me call it into question; and thus I have a true and certain knowledge of it. And this same knowledge extends also to every other thing which I remember having demonstrated before, as well as to the truths of geometry, and similar things: for what objection

can be brought forward to oblige me to call them into question? That my nature is such that I am very liable to be mistaken? But I already know that I cannot deceive myself in judgments the reasons for which I know clearly. That I have at times esteemed many things as true and certain which I have afterwards seen to be false? But I did not perceive any of these things either clearly or distinctly, and not then knowing that rule by which I assure myself of the truth, I was led to believe them by reasons which I have since recognised to be less strong than I imagined them at the time. What more, then, shall any one be able to object? That I sleep, perhaps (as I myself have objected above), or that all the thoughts which I now have are no more true than the dreams which we imagine when asleep? But even if I were asleep, all which presents itself to my mind with evidence is absolutely true.

And thus I recognise very clearly that the certainty and the reality of all knowledge depends only on the knowledge of the true God, so that before I knew Him, I could not know anything else perfectly. And now that I do know Him, I have the means of acquiring perfect knowledge concerning an infinity of things, not only those

which are in Him, but those also which belong to the corporeal nature, in so far as geometers can use it as the object of their demonstrations, which have nothing at all to do with its existence.

SIXTH MEDITATION.

OF THE EXISTENCE OF MATERIAL THINGS, AND THE REAL DISTINCTION BETWEEN MAN'S MIND AND HIS BODY.

It only remains for me now to examine whether any material things exist; and certainly I already know that at least material things can exist, in so far as they are considered as the object of geometrical demonstrations, seeing that by this means I conceive them very clearly and very distinctly. For there is no doubt at all that God has the power of producing everything that I am capable of conceiving distinctly, and I have never judged it impossible for Him to cause any thing, as by that alone I found contradiction in the power of perfect conception. Moreover, the faculty of imagining which is within me, and which I see by experience I make use of when I apply myself to the consideration of

material things, is capable of persuading me of their existence, for when I consider attentively what imagination is, I find it is only a certain application of the faculty which perceives, to the body which is intimately present to it, and thus which exists.

And to make that plainer, I first remark the difference between imagination and pure intellection, or conception. For example, when I imagine a triangle, I not only conceive that it is a figure composed of three lines, but, at the same time, I behold these three lines as present by the force and inward application of my mind, and it is properly this which I call imagination. While if I wish to think of a chiliogon, I indeed conceive truly that it is a figure composed of a thousand sides, as easily as I conceive that a triangle is a figure composed of three sides only, but I cannot imagine the thousand sides of a chiliogon as I can the three sides of a triangle, or, so to speak, regard them as present with my mind's eye. And although, according to my usual custom of always making use of my imagination when I think of corporeal things, it happens that in conceiving a chiliogon I confusedly represent to myself some figure, yet it is very evident that this figure is not a chiliogon, since it in no way differs from that which I should

represent to myself if I thought of a myriogon, or some other many-sided figure, and in no way helps to discover the properties which make the difference between the chiliogon and other polygons.

But if it is a question of considering a pentagon, it is very true that I am able to conceive its shape as well as that of a chiliogon, without the aid of my imagination, but I can also imagine it by directing the attention of my mind to each of its five sides, and to the area or space which they enclose. Thus I know clearly that I have need of a particularly intense application of mind in order to imagine, of which I do not make use to conceive or to understand; and this particular application of mind plainly shows the difference between the imagination and intellection, or pure conception.

Besides that, I observe that this virtue of imagination which is in me, inasmuch as it differs from the power of conception, is by no means necessary to my nature or to my essence, that is to say, to the essence of my mind, for even if I had it not, it is beyond doubt that I should always remain the same as I am now: whence it seems that we may conclude that it depends on something different from my mind. And I easily conceive that if some body exists with which my mind is so conjoined and united that it can set

itself to consider it whenever it pleases, it is possible that by this means it imagines corporeal things; so that this mode of thought differs only from pure intellection in that the mind in conceiving turns in some way towards itself, and considers some one of the ideas which it has within it; while in imagining it turns towards the body and considers therein something conformable to the idea which it has formed itself, or which it has received by the senses. I easily conceive, I say, that the imagination can be caused thus, if it is true that bodies exist, and because I cannot come across any other way of explaining it, I therefore conjecture that there probably are bodies, but it is only probability, and although I examine everything carefully, I nevertheless find that from this distinct idea of the corporeal nature which I have in my imagination, I can draw no argument from which I necessarily conclude the existence of any body.

Now I am accustomed to imagine many other things besides this corporeal nature which is the object of geometry; for example, colours, sounds, tastes, pain, and other similar things, though less distinctly: and seeing that I perceive these things far better through the senses, by the medium of which and of the memory they appear to have

reached my imagination, I believe that to examine them more conveniently it is pertinent for me to examine at the same time what it is to feel, and see whether, from the ideas that I receive in my mind by this mode of thought which I call sensation, I shall not be able to extract some certain proof of the existence of corporeal things.

And, in the first place, I shall recall to my memory what are the things which I have formerly held as true, having received them through the senses, and on what foundations my belief is based; then I shall examine the reasons which have since obliged me to call them into question; and finally I shall consider what I ought now to believe of them.

Firstly, then, I have felt that I have a head, hands, feet, and all the other members which make up the body which I am going to consider as a part of myself, or perhaps as the whole as well. Moreover, I have felt that this body was placed among many others, from which it was capable of receiving various conveniences and inconveniences, and I remarked the conveniences by a certain feeling of pleasure or gratification, and the inconveniences by a feeling of pain. And besides this pleasure and pain, I also felt in myself hunger, thirst, and other like appetites, and also certain corporeal inclinations towards joy, sadness, anger,

and similar passions. And outwardly, besides the extension, shapes, and motions of bodies, I observed in them hardness, heat, and all the other qualities which come under the touch; and again, I observed in them light, colours, odours, tastes, and sounds, whose variety gave me the means of distinguishing the sky, the earth, the sea, and all other bodies from each other.

And certainly, considering the ideas of all these qualities which presented themselves to my thought, and which alone I felt accurately and immediately, it was not without reason that I believed I was conscious of things entirely different from my thought, to wit, bodies whence these ideas proceeded; for I experienced that they presented themselves to it without my consent being required, so that I could not be conscious of any object, whatever my will to do so, if it was not present to the organ of one of my senses, and it was in nowise in my power not to feel it when it was thus present.

And because the ideas which I received by the senses were much more vivid, more positive, and even in their way more distinct than any of those which I could feign of myself by meditation, or which I found imprinted in my memory, it seemed that they could not proceed from my mind, so that

it was necessary for them to have been caused in me by some other things. And having no knowledge of these things, except that given me by these same ideas, nothing else could occur to me except that the things were similar to the ideas that they caused.

And also because I recollected that I had made use of my senses rather than of my reason, and because I recognised that the ideas which I formed of myself were not so positive as those which I received through the senses, and were even for the most part frequently composed of parts of these, I easily persuaded myself that I had no idea in my mind which had not first passed through my senses.

It was not without reason, either, that I believed that this body (which by a certain particular right I call mine) belonged to me more properly and more strictly than any other; for truly I could never be separated from it as from other bodies, in it and through it I felt all my appetites and all my affections, and finally, I was inspired with sensations of pleasure and of pain in its parts, and not in the parts of any other bodies which are distinct from it.

But when I came to examine why sadness of the mind ensues from this I know not what sen-

sation of pain, and why joy springs from the sensation of pleasure, or why this I know not what emotion of the stomach, which I call hunger, makes us desire to eat, and dryness of the throat makes us desire to drink, and so on with the rest, I could render no reason for these things, except that nature taught me in that way; for certainly there is no affinity or connection (at least none that I can understand) between this emotion of the stomach and the desire to eat, any more than between the sensation of the thing which causes pain and the thought of sadness which ensues upon this sensation. And, in the same way, it seemed to me that I had learned from nature all the other things which I judged touching the objects of my senses, because I remarked that the judgments which I was accustomed to make on these objects formed themselves in me before I had leisure to weigh them and consider any reasons which might oblige me to make them.

But, subsequently, many experiences have little by little destroyed all the credence which I gave to my senses; for many times I have observed that towers which from afar off looked to me to be round, appeared on a nearer view to be square; that colossi elevated on the highest summits of these towers seemed to me little statues when

I looked at them from below: and thus, on numberless other occasions, I have found error in the judgments founded on the external senses, and not on the external senses alone, but even on the internal. For what is there more intimate or more inward than pain? And yet in past days I have learned of persons who have had legs and arms amputated that it sometimes seemed to them that they still felt pain in the parts which they no longer possessed. This gives me reason to think that thus I cannot be entirely assured of having pain in any of my members, although I may feel pain there.

And to these reasons for doubt I have since added two more which are very general. The first is, I have never, when awake, believed that I felt anything which I could not also sometimes believe I felt when asleep: and as I do not believe that the things which I think I feel when asleep proceed from any objects outside myself, I did not see why I ought to have this belief touching those which it seems to me that I feel when awake. And the second is, that not yet knowing, or rather feigning not to know the author of my being, I saw nothing against my having been so made by nature, that I might deceive myself even in things which appear to me most true.

And as for the reasons which had hitherto per-

suaded me of the truth of sensible things, I had not much difficulty in replying to them. For as nature appeared to lead me to many things from which reason deterred me, I did not believe that I ought to place very much reliance on its teachings. And although the ideas which I receive through the senses do not depend upon my will at all, I did not think that I ought on that account to conclude that they proceeded from things different from myself, since perhaps some faculty is to be met with in me (though unknown to me hitherto) which is their cause and which produces them.

But now that I begin to know myself better, and to discover more clearly the author of my origin, in truth I do not think that I ought rashly to admit all the things that the senses appear to teach us, nor yet do I consider that I should call them into question as a matter of course.

And in the first place, because I know that all the things which I conceive clearly and distinctly can be produced by God such as I conceive them to be, it suffices that I can distinctly and clearly conceive one thing without another, in order to be certain that one is distinct or different from another, because they can be placed apart, at least by the omnipotence of God; and by whatever power this separation is made they must

be adjudged to be different: and thus even from the fact that I know with certainty that I exist, and that nevertheless I do not notice that anything else necessarily belongs to my nature or to my essence, except that I am a thing which thinks, I conclude indeed that my essence consists in this alone,—that I am a thing which thinks, or a substance whose essence or nature is only to think. And although perhaps, or rather for certain (as I shall say presently), I have a body to which I am very straitly conjoined, nevertheless, because on the one hand I have a clear and distinct idea of myself, inasmuch as I am only a thing which thinks, and not extended, and on the other I have a distinct idea of the body, inasmuch as it is only an extended and non-thinking thing, it is certain that I, that is to say my mind, by which I am what I am, is entirely and truly distinct from my body and can be or exist without it.

Moreover, I find in myself divers faculties of thinking, each of which has its own particular mode. For example, I find in me the faculties of imagining and feeling, without which I can indeed clearly and distinctly conceive myself an entity, but not, reciprocally, them without me, that is to say, without an intelligent substance to which they are attached or to which they belong. For in the

notion that we have of these faculties or (to use the school terms) in their formal concept, they contain some sort of intellection; whence I perceive that they are different from me, as modes are different from things.

I recognise also some other faculties, as those of changing place, of taking various situations, and similar things which cannot be conceived, any more than the preceding, without some substance to which they are attached, and consequently, cannot exist without it. But it is very evident that these faculties, if it is true that they exist, ought to belong to some corporeal or extended body, and not to an intelligent substance, since in their clear and distinct conception some sort of extension is indeed contained, but no intelligence at all.

Moreover, I cannot doubt that there is in me a certain passive faculty of feeling, that is to say, of receiving and recognising the ideas of sensible things; but it would be useless to me, and I could in no way employ it, if there were not also within me, or in some other thing, an active faculty capable of forming and producing these ideas. Now this active faculty cannot be in me, inasmuch as I am only a thing which thinks, seeing that it does not presuppose my thought,

and also that these ideas are often represented to me without any help at all from myself, and even against my will; therefore it must necessarily be in some substance different from me, in which all the reality which is objectively in the ideas produced by this faculty is contained formally or eminently (as I have remarked above), and this substance must be either a body, that is to say, a corporeal nature, in which is contained formally and indeed all which is objectively and by representation in these ideas, or it is God Himself, or some other creature more noble than the body, in which the body itself is contained eminently.

But God not being a deceiver, it is very manifest that He does not send me these ideas immediately from Himself, or by the medium of some creature in which their reality is contained only eminently and not formally. For having given me no faculty of knowing that that is so, but, on the contrary, a very great inclination to believe that they proceed from corporeal things, I do not see how we could acquit Him of deceit, if these ideas indeed came from elsewhere, or were produced by causes other than corporeal things; and thus we must conclude that there are corporeal things existing. Yet perhaps they are

not altogether such as we perceive them by the senses, for there are many things which render the perception of the senses very obscure and confused; but at least it must be acknowledged that everything which I can perceive in them clearly and distinctly,—that is, everything, generally speaking, with which speculative geometry is concerned,—is really met with in them.

But as regards other things, which are either only particular,—for example, that the sun is of such a size and such a shape, and so on,—or are conceived less clearly and less distinctly, such as light, sound, pain, and similar things, it is certain that although they may be very doubtful and uncertain, yet from the mere fact that God is not a deceiver, and consequently has not permitted that there can be any falsity in my opinions without giving me also some faculty of correcting it, I think I may surely conclude that I have within me the means of knowing them with certainty.

And firstly, there is not the least doubt that all that nature teaches me contains some truth. For by nature considered in general I now mean nothing but God Himself, or the order and disposition which He has established in created things; and by my nature in particular I mean

merely the constitution or assembly of everything that God has given me.

And there is nothing that this nature teaches me more expressly or more palpably than that I have a body which is ill-disposed when I feel pain, which needs to eat and drink when I feel hunger and thirst, and so on. And thus I ought in no-wise to doubt that there is some truth in this.

Nature also teaches me by these feelings of pain, hunger, thirst, etc., that I am not only lodged in my body like a pilot in his boat, but also that I am so blended and intermixed there-with, and so very narrowly conjoined to it, that I am but one with it. For were this not so, when my body is wounded, I should not on that account feel any pain, I who am only a thing which thinks, but I should perceive the wound merely by the understanding, as a pilot perceives by sight if anything in his vessel gets broken. And when my body needs to drink or to eat, I should know merely that alone, without being warned of it by confused feelings of hunger and thirst. For in truth all these sensations of hunger, thirst, pain, etc., are only certain confused modes of thought, which spring from and depend on the union of the mind with the body, and as if on the blending of the two.

Besides this, nature teaches me that many other bodies exist around mine, some of which I have to pursue, and some of which I have to avoid. And certainly, because I am sensible of different sorts of colours, odours, tastes, sounds, heat, hardness, etc., I indeed conclude that in the bodies whence all these divers perceptions of the senses proceed, there are some variations which correspond to them, although perhaps these variations do not really resemble them; and from the fact that among these divers perceptions of the senses some are agreeable to me and others disagreeable, there is no doubt that my body (or rather my entire self, inasmuch as I am made up of body and soul) can receive divers conveniences and inconveniences from the other bodies about it.

But there are many other things which apparently nature has taught me, which nevertheless I have not truly learned from her, but which have introduced themselves into my mind by a certain custom I have of judging things without due consideration, and thus it may easily happen that they contain some falsity, as, for example, my opinion that all space in which there is nothing which moves, and makes an impression on my senses, is empty; that in a body which is warm, there is something resembling the idea

of heat which is in me; that in a black or a white body there is the same whiteness or blackness which I am sensible of; that in a bitter or sweet body there is the same taste or the same savour, and thus with others; that stars, towers, and all other remote bodies are of the same shape and size as they appear to our eyes from afar, etc.

But in order that there be nothing in this which I do not conceive distinctly, I ought to define precisely what I really understand when I say that nature teaches me something. For here I use the word nature in a more restricted sense than when I call it an assemblage or a constitution of all the things which God has given me, seeing that this assemblage or constitution comprehends many things which belong to the mind alone, of which I do not intend to speak here in speaking of nature,—for example, my notion of this truth, that what has been once done can no longer not have been done, and an infinity of similar things which I know by the natural light without the aid of the body,—and because it also comprehends many others which belong to the body alone, and which also are not here included in the term nature, such as the quality which the body has of being heavy, and many like things. I am not speaking of these either, but only of the

things which God has given me, as being composed of mind and body. For this nature indeed teaches me to avoid things which cause in me the sensation of pain, and to incline towards those which give me some sensation of pleasure, but I do not see that it also teaches me that from these various perceptions of the senses we ought ever to conclude anything concerning things which are outside us, unless the mind has carefully and maturely examined them; for it seems to me that it is to the mind alone, and by no means to the united mind and body, that it appertains to know the truth of these things.

Thus, although a star might make no more impression on my eye than the flame of a candle, nevertheless there is no real or natural faculty in me which leads me to believe that it is not greater than this flame, but I have judged it to be so, from my earliest years, without any reasonable foundation. And although in approaching the flame I feel heat, and even on approaching a little too near I feel pain, there is nevertheless no reason which can persuade me that in the flame there is anything which is like this heat, any more than like this pain, but I merely have reason to believe that there is something in it, whatever it may be, which excites in me these sensations of heat or pain.

In the same way, too, although there may be spaces in which I find nothing which excites and stirs my senses, I ought not therefore to conclude that these spaces contain no bodies; but I see that in this, as well as in many other similar things, I am accustomed to pervert and confuse the order of nature; because these sensations or perceptions of the senses having been put in me only to indicate to my mind what things are suitable or hurtful to the composition of which it is part, and up to that point being clear and distinct enough, I use them, nevertheless, as if they were very certain rules by which I can immediately know the essence and nature of bodies outside me, of which, notwithstanding, they can teach me nothing which is not very obscure and confused.

But I have now already sufficiently examined how, notwithstanding the sovereign goodness of God, it happens that there is error in the judgments which I make in this way. Only here again a difficulty presents itself, touching the things which nature teaches me ought to be followed or avoided, and also concerning the inward sentiments which nature has placed within me; for it seems I have sometimes noticed error in them, and thus that I am directly deceived by my nature; as, for example, the agreeable taste of some food in which

poison has been mixed might invite me to take this poison, and thus deceive me. It is nevertheless true that herein nature may be excused, for it only leads me to desire the meat in which an agreeable taste is met with, and not to desire the poison, which is unknown to it, so that I cannot conclude from this anything except that my nature does not entirely and universally know everything, —at which there is certainly no occasion to wonder, since man, being of a finite nature, can have also a knowledge of but limited perfection.

But we also deceive ourselves very frequently even in the things to which we are directly led by nature, as in the case of sick persons, when they desire to eat or to drink that which may hurt them. Here, perhaps, it will be said that the reason that they deceive themselves is that their nature is corrupted, but that does not remove the difficulty, for a sick man is no less the creature of God than a man in perfect health, and thus it is as opposed to God's goodness that the one should have a deceitful and defective nature as that the other should have it. And as a clock, made up of wheels and balance, observes the laws of nature no less exactly when it is ill-made and does not accurately show the hours, as when it entirely satisfies the workman's desire, so also, if I con-

sider the human body as a machine so built up and composed of nerves, muscles, veins, blood, and skin, that although there were no mind in it, it would still continue to move in all the same ways as it does at present when it does not move by the direction of man's will, nor, consequently, by the aid of the mind, but only by the disposition of its organs, I easily recognise that it would be as natural to this body, being, for example, dropsical, to suffer the dryness of the throat which usually conveys to the mind the feeling of thirst, and to be disposed by this dryness to move its nerves and other parts in the manner requisite for drinking, and thus to augment the disease and injure itself, as it is for it when it is well to be led by a similar dryness of throat to drink for its benefit. And although, as regards the use to which a clock has been destined by him who fashioned it, I might say that it revolts against its nature when it does not accurately mark the time, and although in the same way, considering the machine of the human body as having been formed by God to have in itself all the movements which are usually in it, I have reason to think that it does not follow the order of its nature when its throat is dry and when to drink is harmful to its conservation, I nevertheless recognise that this latter way of explaining

nature is very different from the former, for this one is only a certain exterior denomination depending entirely on my thought, which compares a sick man and an ill-made clock, with my idea of a healthy man and a well-made clock, and signifying nothing which is really in the thing of which it is stated, while that by the other I understand something really found in things, and thus not without some truth.

But certainly, although as regards a dropsical body it is only an exterior denomination when we say that its nature is corrupt when, without having need to drink, it yet has a dry and parched throat, still, with regard to the whole compound, that is to say, of the mind or soul united to the body, it is not a pure denomination, but a veritable error of nature, that it is thirsty when it is very injurious to drink; and thus it still remains for us to examine why the goodness of God does not prevent the nature of man, taken in this manner, from being faulty and deceitful.

To begin this examination, therefore, I remark, in the first place, that there is a great difference between mind and body, in that this body, from its nature, is always divisible, while the mind is entirely indivisible. For, indeed, when I consider it, that is to say, when I consider myself, inasmuch as

I am only a thing which thinks, I cannot distinguish in myself any parts, but I recognise and very clearly conceive that I am an absolute and entire entity. And although the whole mind appears united to the whole body, yet when a foot or an arm or some other part comes to be separated from it, I plainly recognise that, nevertheless, nothing has been taken from my mind; and the faculties of willing, of feeling, of perceiving, etc., cannot properly be called its parts, for it is the same mind which exerts itself wholly to will, and wholly to feel and to perceive, etc. But it is quite the contrary in corporeal or extended things, for I cannot imagine any, however small, which I do not easily divide by my thought, or which my mind does not easily separate into many parts, and which, consequently, I may not know to be divisible. This would be enough to teach me that the mind or soul of man is entirely different from the body, if I had not already learnt it from elsewhere.

I also observe that the mind does not directly receive the impression from every part of the body, but only from the brain, or perhaps even from one of the smallest parts of the brain,—to wit, that which exercises the faculty called common sense, which, every time it is disposed in the same

way, makes the mind feel the same thing, although, nevertheless, the other parts of the body may be diversely disposed, as testified by an infinity of experiments which it is not necessary to recall here.

Besides that, I remark that the nature of the body is such that none of its parts can be moved by another part a little removed from it, if it cannot be moved in the same way by each of the intermediate parts, although this more remote part may not act. As, for example, in the extended cord A B C D, if we come to pull and move the last part D, the first part A will not be moved in any other way than it could be if we also drew one of the middle parts B or C, and if the last, D, meanwhile remained motionless. And in the same way, when I feel pain in my foot, physics teach me that this sensation is communicated by means of the nerves disposed in the foot, which, extending like cords from thence to the brain, when they are drawn in the foot also draw at the same time that part of the brain whence they come, and to which they join, and there excite a certain movement which nature has instituted to make the mind feel the pain as if this pain were in the foot; but because these nerves must pass by the leg, the thigh, the loins, the back, and the neck in order to reach from the foot to the brain, it may happen

that although indeed their extremities in the foot are not moved, but only some of their parts which pass by the loins or by the neck, nevertheless the same movement is excited in the brain which could be excited there by a wound received in the foot; consequently it will be necessary for the mind to feel in the foot the same pain as if a wound were there; and the same must be judged of all the other perceptions of our senses.

Finally, I note that, since each of the movements which take place in the part of the brain from which the mind directly receives the impression, can make it sensible of but one feeling, we can wish or imagine nothing better than that this movement may make the mind to feel, among all the sensations which it is capable of exciting, that which is most proper and most generally useful to the conservation of the human body when it is in full health. Now experience makes us aware that all the feelings which nature has given us are such as I have just said, and thus there is nothing in them which does not show the power and the goodness of God.

Thus, for example, when the nerves which are in the foot are strongly moved beyond the ordinary, their movement, passing by the marrow of the spine of the back up to the brain, makes there an

impression in the mind which causes it to feel something, to wit, a pain, as being in the foot, by which the mind is warned and excited to do its utmost to drive away the cause thereof as very dangerous and hurtful to the foot.

It is true that God could dispose the nature of man in such a way that this same movement in the brain made the mind feel something else; for example, that it felt itself, in so far as it is in the brain, or in so far as it is in the foot, or in so far as it is in some other part between the foot and the brain, or, in briet, any other thing whatsoever; but nothing of all that would have so well contributed to the conservation of the body as that which it really makes it feel.

In the same way, when we have need to drink, there springs from this need a certain dryness in the throat which excites its nerves, and by their means the interior parts of the brain, and this movement makes the mind feel the sensation of thirst because, on that occasion, there is nothing more useful to us than to know that we have need to drink for the conservation of our health, and so with the rest.

From this it is entirely manifest that notwithstanding the sovereign goodness of God, the nature of man, insomuch as it is composed of

mind and body, cannot help being sometimes faulty and deceitful. For if there is any cause which excites—not in the foot, but in some one of the parts of the nerve which extends from the foot to the brain, or even in the brain—the same movement which is ordinarily made when the foot is ill-disposed, the pain will be felt as if it were in the foot, and naturally the sense will be deceived; because the one same movement in the brain being able to cause but the one same feeling in the mind, and this feeling being much oftener excited by a cause which wounds the foot than by another which is elsewhere, it is much more reasonable that it should always convey to the mind the pain of the foot rather than that of any other part. And if it sometimes happens that the dryness of the throat does not arise as usual from the fact that drink is necessary for the health of the body, but from some wholly contrary cause, as in the case of those who are dropsical, yet it is much better that it should deceive in this instance than that, on the contrary, it should always deceive when the body is well-disposed, and so with the rest.

And certainly I find this consideration most useful, not only for recognising all the errors to which my nature is liable, but also for avoiding

them, or correcting them more easily. For knowing that all my senses usually indicate to me the true rather than the false, touching the things which concern the convenience or inconvenience of the body, and being able almost always to employ many of them for examining one thing, and, besides that, being able to make use of my memory, to connect and join the present pieces of knowledge with older ones, and of my understanding, which has already discovered all the causes of my errors, henceforth I should no longer fear any falsity occurring in the things which are most usually represented to me by my senses. And I ought to reject all the doubts of these past days as hyperbolical and ridiculous, particularly that general uncertainty as to sleep, which I could not distinguish from waking; for I now discover a very notable difference between them, in that our memory can never connect and join our dreams with one another and with the rest of our life, as it is accustomed to join the things which happen to us when awake. And indeed, if, when I am awake, any one were suddenly to appear to me, and disappear in the same way, as do the images I see when asleep, so that I could not remark either whence he came or whither he went, it would not be without reason that I should

esteem him a spectre or a phantom formed in my brain, and like to those formed there when I sleep, rather than a real man. But when I perceive things of which I know distinctly the place whence they come and where they are, and the time at which they appear to me, and when, without any interruption, I can connect the sensation I have of them with the rest of my life, I am entirely assured that I perceive them while awake and not when asleep. And I ought in nowise to doubt the truth of those things if, after having summoned all my senses, my memory, and my understanding for the purpose of examining them, none of these convey to me anything repugnant to what is conveyed to me by the others. For from the fact that God is not a deceiver, it necessarily follows that I am not deceived therein.

But because the necessity of circumstances often obliges us to come to a decision before we have had leisure to examine them thus carefully, it must be confessed that human life is very often liable to fail in particular instances, and, in conclusion, we are bound to recognise the infirmity and weakness of our nature.

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